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## ABSTRACT

This 2-year program, extending from 1968 to 1970, was to develop a comprehensive teacher education program encompassing both inservice and preservice education and to establish self-renewing procedures in the Guam educational agencies. Workshops utilizing instructional systems developed by the Northwest Regional Educational Laboratory served as inservice education for elementary and secondary school teachers and University of Guam faculty during 1968-69. The workshops focused on specific teaching skills. Four of the instructional systems have been implemented as courses and will continue to be available to teachers and college faculty as inservice until their place in a continuous teacher education curriculum can be determined. A key element of the self-renewing procedure is the use of teachers trained in the original inservice workshops as trainers for other teachers. Activities in 1969-70 led to the development and acceptance of a 5-year plan that will enable the University of Guam to develop a comprehensive teacher education program. (The report includes several appendixes which describe workshop content and present results of participant evaluation of the workshops. A flow chart of the five-year development plan is also included.) (RT)

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GUAM EDUCATION PROJECT:  
TEACHER EDUCATION PROGRAM

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FINAL REPORT: July 31, 1970

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## CHAPTER I

### OVERVIEW

This chapter will be concerned with the history, purposes, organization and development of the Teacher Education Program, including dissemination activities and relationships with other projects of the Northwest Regional Educational Laboratory on Guam.

### HISTORY

In 1965, a group of educators from the Pacific met in Honolulu, Hawaii, and wrote a proposal for a Pacific Basin Regional Laboratory. The proposal was submitted for funding under the Elementary and Secondary Education Act of 1965. Guam, the Trust Territory, Hawaii and Samoa were represented, among others, at the meeting.

The proposal was turned down by the United States Office of Education and, subsequently, the educational institutions and agencies of the Pacific area were invited to seek assistance from one of the three West Coast educational laboratories. As a result of that invitation, a contract was negotiated between Guam and the Northwest Regional Educational Laboratory, (NWREL), located in Portland, Oregon. Laboratory officers visited Guam to write a proposal, which was adopted, with the general objective of providing training to improve teaching on Guam.

Although the initial contract was to commence September 1, 1968, delays in the final processing postponed the official contract date to November 1, 1968.

A project director was hired and he arrived on Guam November 1, 1968. The initial efforts of the director were aimed at acquainting a larger number of Guam educators with the nature of the project, establishing advisory groups, locating the project office and getting acquainted with some of the more critical educational needs on Guam.

### PURPOSES

The purposes of the Guam Education Project were to assist the University of Guam, the Territorial Department of Education and the schools of Guam:

1. To develop a comprehensive teacher education program (both preservice and inservice) with the following characteristics:

Competency based

Continuous

Individually prescribed

Based on applications of systems technology

Capable of providing components for gradual  
implementation of the program

2. To design and develop an individually prescribed educational program for children, youth and young adults based on the application of systems technology to curriculum development
3. To establish self-renewing procedures in the Guam educational agencies

These three purposes guided the project from 1968 to 1970.

#### ORGANIZATION

In the early days of the project, several types of advisory groups were tried. A single committee for coordination and evaluation was the eventual choice of the President of the University of Guam, the Director of Education and the project director. Two representatives from the University of Guam and two from the Department of Education composed that committee. The President and Director of Education, were ex-officio members of the committee; however, they retained review privileges for all project activities. Since the legal contract was with the University, the President retained final responsibility.

The project director remained directly responsible to the deputy director of the Laboratory and so the organizational chart becomes complex (see Figure 1).

As the project developed, the project director assumed additional responsibilities associated with other NWREL projects on Guam. A project coordinator was hired to assume responsibility for the Teacher Education Project.

#### DEVELOPMENT

The original designers envisioned a two-year project. The first contract period was from September 1, 1968 to August 31, 1969. Certain changes in the scope of work made it desirable to begin the second contract before the first had expired.

One factor was the decision of the project director and the Coordination and Evaluation Committee to accelerate the introduction of the Laboratory's instructional systems. This decision was based primarily on evidence of high interest in the initial training program and the fiscal feasibility of immediately following up the first level of training. In addition, officials on Guam and at the Laboratory felt that sound administrative practice dictated that the second contract correspond with the Guam government's fiscal year.

The second contract period became July 1, 1969 to June 30, 1970. These two contract periods and the resulting overlap became known as Phase I and Phase II. The relationships are shown in Figure 2, page 3.

Figure 1

ORGANIZATIONAL CHART NWREL/GUAM EDUCATION PROJECT

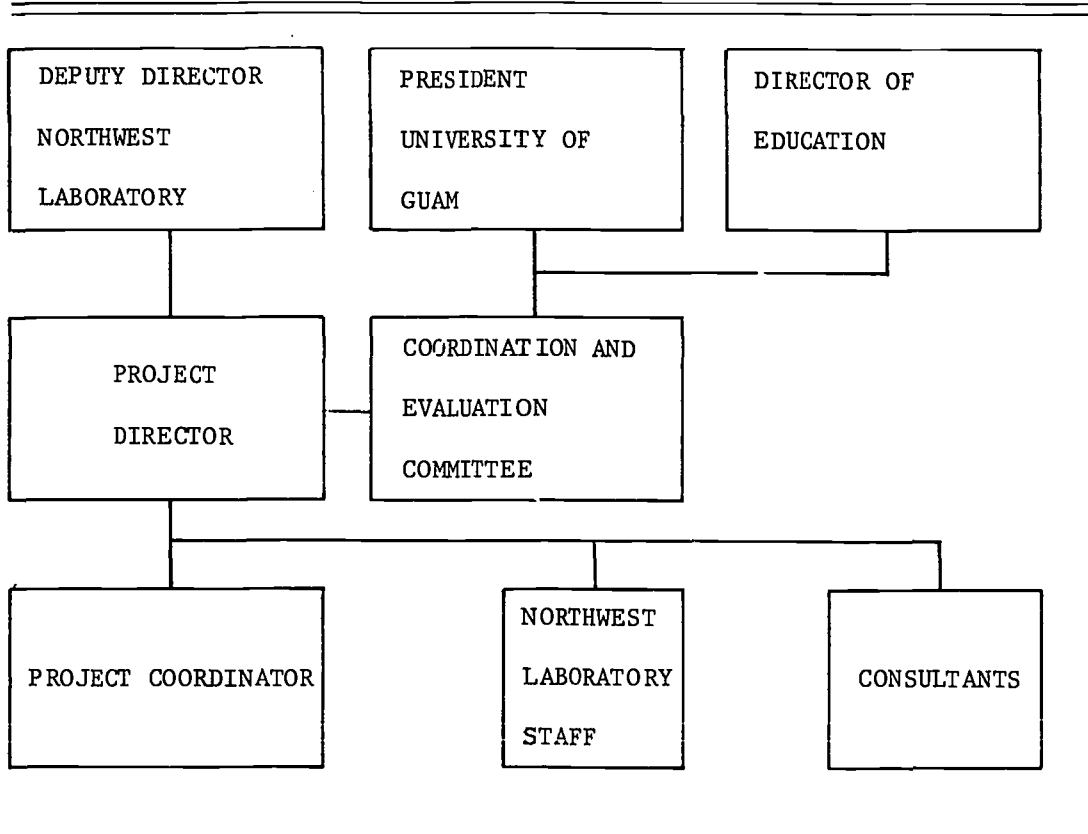
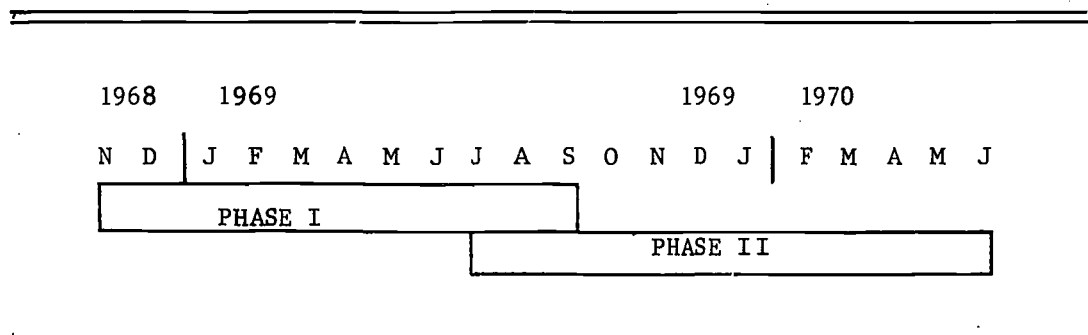


Figure 2

Time line relationship for Phase I and II  
of the NWREL/Guam Education Project





The need for a self-renewing process is evident in two facts about Guam education: (1) a history of outside agencies initiating new programs which quickly die, and (2) a high turnover rate in personnel.

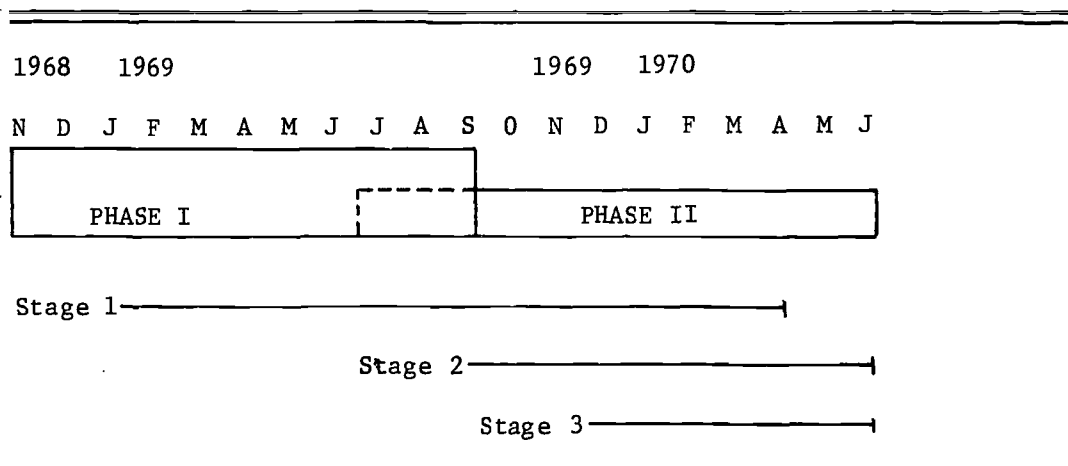
In Stage 2, the followup stage, the Guam educators who were trained in Stage 1 serve as instructors to a wider audience of Guam educators. A Laboratory consultant is on hand to assist them in their initial efforts as trainers.

In Stage 3, the adaptation stage, the Guam educators make decisions about how and where the various instructional systems, information, and/or materials belong in the Guam educational program, both preservice and inservice. Assistance was available from the Laboratory staff in making these adaptations.

The manner in which the various activities of the program relate to the stages of the self-renewing process is described in Chapter IV.

The relationships between the two contract phases described earlier and the three stages of the self-renewing process are shown in Figure 3.

The relationship between the two contract phases and the three stages of the self-renewing process



## DISSEMINATION

The introduction of the first instructional system initiated Stage 1. All building principals and supervisory personnel were invited to attend a series of information meetings where the program and the criteria for selection of applicants were discussed. Similar informative meetings were held at the University of Guam. The principals and supervisory personnel then distributed applications to those they wished to recommend. Selection procedures were established (see Chapter II and the participants were selected.

In the four subsequent Stage 1 workshops similar procedures were followed. Applications were distributed throughout the Department of Education to all professional staff and throughout selected departments at the University of Guam. Five information meetings were held to acquaint University and Department of Education personnel with the workshops.

Stage 2 began in the summer session of 1969. Five instructional programs introduced by the Laboratory were offered by the University of Guam in the regular summer session. The instruction was provided by Guam educators trained in Stage 1. Descriptions of the program and application forms were mailed to all professional staff members in Guam's public and private schools to follow up the Stage 1 workshops.

## RELATIONSHIP TO OTHER PROGRAMS

In addition to this Teacher Education Program, the University of Guam and the Department of Education have cooperated on another project administered by the Laboratory.

The complimentary project was funded under the Education Professions Development Act and involved two major efforts. Project I was to develop an Education Objectives Commission for Guam and Project II was to develop an Orientation Program for Contract Teachers.

A number of workshops were conducted as a part of these two projects. While credit for the workshops should properly be taken in the EPDA Project, many of the personnel involved in the Teacher Education Project became involved in them. Thus the Teacher Education Project was strengthened through this supplementary and complimentary effort.

## CHAPTER II

### INSERVICE EDUCATION

Project activities carried out during 1968-69 and 1969-70 were primarily of two types: (1) workshops designed to provide inservice education for Department of Education personnel and University of Guam faculty, and (2) developmental planning for a comprehensive Teacher Education Program at the University of Guam. The inservice education activities are discussed below.

#### INSTRUCTIONAL SYSTEMS WORKSHOPS

The original contract required that one instructional system be initiated between November 1, 1968 and June 30, 1969, to train 12 participants selected from the University of Guam and the Department of Education. Early in 1969, the project director and the Coordination and Evaluation Committee determined that due to high interest in the initial training program and fiscal feasibility, four additional workshops could be offered in the spring of 1969. For a description of each of the five workshops conducted during the spring and summer of 1969, see Appendix A. A sixth instructional system, Questioning Strategies, was introduced to Guam educators, in the spring of 1970. (see Appendix B)

#### SELECTION OF PARTICIPANTS

A specific objective of the Spring 1969 workshops was to develop a cadre of future trainers that would be available for future workshops. Consequently, participants were chosen for their potential as trainers in future workshops.

The following procedures were used for selecting participants in the initial workshop.

1. Specifics for the workshop and criteria for participant selection were developed. The overriding criterion for participants was high leadership potential.
2. The project director and the Coordination and Evaluation Committee asked the dean of the College of Education to recommend and make the final selection of three participants from the University of Guam. The deputy director of the Department of Education was asked to select nine participants from the Department of Education.
3. University selections were made on the basis of personal interviews with prospective candidates by the dean of the College of Education.
4. Department of Education participants were selected on the basis of applications and recommendations from the principals and consultants.

5. The successful applicants were notified and in all cases accepted. A total of 52 applications were received for the 12 positions.

In the four subsequent workshops similar procedures were followed. For each workshop, the overriding criterion for selecting participants was their demonstrated leadership potential. There were three major differences in selection procedures in these later workshops: (1) dissemination of information about the workshops was provided by five meetings held at Adelup Elementary, Inarajan Junior High, Dededo Junior High, the University Library and the Department of Education Conference Room; (2) the dean of the College of Education selected six participants from University faculty applicants; and (3) the Inservice Education Committee, chaired by the Supervisor of Federal Aid to Education for the Department of Education, selected six public school personnel to participate.

There were a total of 157 applicants for the 48 positions. The number of persons applying for each of the workshops was almost equally divided.

#### Consultants and Trainers.

Consultants for each of the six workshops were those having extensive prior experience with a particular instructional system developed by the Northwest Regional Educational Laboratory. The project director conducted one of these workshops. Consultants for the other workshops were brought to Guam for this purpose.

The spring 1969 workshops were dedicated to the "training of trainers." The summer 1969 workshops utilized a selected number of the spring 1969 participants as assistant trainers. The assistant trainers worked with an experienced Laboratory consultant to further their development as trainers. Additional help was given the assistant trainers for the Systematic and Objective Analysis Workshop. There individuals also participated in a five-day Interpersonal Relations workshop to enhance their skills in this area.

The number of assistant trainers used in each workshop is shown in Table 1, page 8.

#### Description of Participants.

Table 2, page 9, shows the number of participants at each of the seven workshops. The total of 176 represents 115 different individuals. Thirty-nine (39) individuals participated in more than one workshop. Most Department of Education participants were involved in only one workshop while over half of the University of Guam participants were involved in two or more workshops. One faculty member participated in six. Additional data on the participants may be found in Appendix A.

#### EVALUATION OF WORKSHOP

Several evaluative reports have been made of the workshops to date. Two were made by Mr. Allen Caraway at the conclusion of the spring 1969 workshops (see Appendix C), the other at the conclusion of the summer

TABLE 1

Workshop Assistant Trainers  
Summer 1969

Workshop Title	Number of Assistant Trainers
Systematic & Objective Analysis of Instruction	4
Research Utilizing Problem Solving	4
Development of Higher Level Thinking Abilities	2
Inquiry Development	4
Analysis of Pupil-Teacher Interaction	2
TOTAL	16*

\*The number 16 represents 14 individuals; two individuals served as assistant trainers in two workshops.

TABLE 2

Workshop Participants According  
To Institution, Type and Year

Type	Spring 1969					Summer 1969					Spring 1970					TOTAL
	DOE*	UG	PS	Sub Tot		DOE	UG	PS	Sub Tot		DOE <sup>1</sup>	UG	PS	Sub Tot		
SOAI**	9	3	--	12		18	--	--	18		--	--	--	--		30
RUPS	9	3	--	12		3	--	3	6		--	--	--	--		18
HLTA	9	2	--	11		4	--	9	13		--	--	--	--		24
ID	10	2	--	12		18	1	2	21		--	--	--	--		33
IA	7	5	--	12		26	--	3	29		--	--	--	--		41
QS	--	--	--	--		--	--	--	--		9	11	--	20		20
IPR	--	--	--	--		9	1	--	10		--	--	--	--		10
TOTAL	44	15	--	59		78	2	17	97		9	11	--	20		176

Key:

\*DOE -- Department of Education / UG -- University of Guam / PS -- Private Schools

\*\*SOAI -- Systematic and Objective Analysis of Instruction

RUPS -- Research Utilizing Problem Solving

HLTA -- Development of Higher Level Thinking Abilities

ID -- Inquiry Development

IA -- Analysis of Pupil-Teacher Interaction

QS -- Questioning Strategies

IPR -- Interpersonal Relations

1969 workshops (see Appendix D). A followup assessment was made by Mr. Tom Thomas during the spring of 1970 to determine the extent of change in participants' ratings since they were in the workshops. This followup report comprises Appendix A.

Since all three of the evaluation reports are included in their entirety in the Appendices, only a few generalized remarks are made here. First, in all three reports, each workshop appears to have been well received by the participants. The overwhelming majority of the participants: (1) felt the workshops were valuable to them personally, (2) rated them high compared to other professional education courses they had had, (3) rated the workshops high compared to other inservice training courses, (4) rated them high in terms of relevance for Guam, and (5) rated them high as permanent inservice or preservice programs for Guam.

A specific objective of the spring 1969 workshop was to develop a cadre of future trainers available for future workshops. Fourteen (14) did serve as assistant trainers during the summer 1969 workshops and two of these assistant trainers provided leadership in two workshops. According to the evaluation, there was no significant loss of quality when the assistant trainers were used. A comparative evaluation of the spring and summer workshops appears in Appendix E.

Evaluations to this point, did not include the Questioning Strategy Workshop held during the spring of 1970. Terminal ratings by the participants of this workshop indicate that it too was well received and it compares favorably with the terminal ratings of the earlier workshops. An evaluation is included in Appendix F.

#### OTHER WORKSHOP ACTIVITIES

University of Guam faculty and Department of Education personnel participated in three other workshops in connection with the Northwest Laboratory. While these workshops were designed as part of EPDA activities, curriculum consultant staff from the Department of Education and faculty from the College of Education were able to participate. The three workshops were

1. Application of Systems Approach to Educational Planning

This workshop was designed to develop skills in procedures and techniques used in the systems approach to educational planning and problem solving. Forty instructional hours. Participants: Department of Education -- 25/ University of Guam -- 10.

2. Evaluation

A 20-hour workshop designed to develop a corps of trained persons to act as consultants on evaluation strategies. Participants: Department of Education -- 40.

3. Instructional Improvement (Constructing tier goals)

A workshop designed to develop skills in constructing a goal tier from existing policy objectives producing

acceptable objective statements at their lower level.  
Twenty instructional hours.

Participants: Department of Education - 12/University of Guam - 4.

These three workshops were particularly important for their informative contribution to the systems approach to educational problems. They also served to encourage thinking in behavioral terms which is necessary in developing a competency-based teacher education program. There is no way to assess the contribution of these workshops to the Guam Teacher Education Project other than informally and subjectively. It should be noted, however, that following these workshops, progress in planning the University of Guam preservice teacher education program, discussed in the next chapter, moved much more rapidly.



## CHAPTER III

### TEACHER EDUCATION PROGRAM

During the two-year period, efforts toward developing a comprehensive teacher education program have resulted in four major accomplishments: (1) inservice opportunities for University of Guam faculty, (2) establishment of a teacher education advisory committee, (3) acceptance of four of the Laboratory's instructional systems as part of the teacher education curriculum, and (4) development of a five-year plan for planning the teacher education curriculum.

#### INSERVICE FOR UNIVERSITY OF GUAM FACULTY

The workshop activities described in Chapter II included participants from both the Department of Education and the University of Guam. To summarize briefly, University of Guam faculty participated in the workshop activities as follows:

1. Twenty-eight faculty members participated in seven workshops.
2. Three-fourths of the faculty of the College of Education took part in at least one of the workshops.
3. Over half of the University of Guam participants attended two or more workshops. One faculty member participated in six of the seven workshops.

In addition to participation in workshop activities, three additional means for providing faculty inservice opportunities were implemented.

Faculty-Student Seminars in Teacher Education. The seminar program was begun in the spring of 1970 for faculty and students in professional education. It took the form of a weekly "brown bag" lunch session. The purpose of the seminar was to acquaint faculty with problems, issues, trends and innovations in teacher education, as well as to provide an opportunity to relate these ideas to the teacher education program at the University of Guam.

Faculty Retreat. A retreat for the faculty was held during the week of March 30 - April 3, 1970. The objective was two-fold: (1) to create a climate for redesigning the teacher education program, (2) to provide information about trends in teacher education -- particularly the nine model teacher education programs funded in 1968 by USOE. Dr. Jesse Garrison of Oregon College of Education served as consultant to the faculty.

Faculty Participation in New Courses. New courses introduced into the curriculum during the past year provided inservice opportunities for the faculty in two ways: (1) provided a faculty member released time to take the new course as a student; and (2) allowed faculty members, after gaining competence in the subject, to team teach the course with another experienced faculty member. During the second semester 1970, two courses recently added to the curriculum had two additional faculty members in them besides the instructor. One of the faculty members had taken the course before but never taught it. He team taught with the main instructor, who has had more experience. The other faculty member was in the course as a student.

#### TEACHER EDUCATION ADVISORY COMMITTEE

As indicated in Chapter I, initial activities carried out during the first year of the project were planned to acquaint faculty and school personnel with instructional systems designed to develop teacher competencies. During the second year increased attention was devoted to the development of the teacher education program at the University. An ad hoc committee, titled the Teacher Education Advisory Committee, was established in September 1969. The committee consisted of six members. Four were from the faculty of the College of Education, one from the Department of English, and one from the Laboratory. The dean of the College of Education served as chairman of the committee.

The function of this committee was to advise the dean of the College of Education and the Laboratory's project director in planning for the development of a comprehensive teacher education program.

One of the guidelines developed by the committee was maximal involvement of faculty in program development. It was stressed that the faculty must determine the characteristics of the program even if those characteristics be different from those specified in the contractual agreement, which were listed on pages one and two of this report.

Two major objectives were established by the Teacher Education Advisory Committee:

- To provide the faculty with information useful in determining future program development

- To develop a five-year plan for the establishment of a comprehensive teacher education program

#### INSTRUCTIONAL SYSTEMS IN THE CURRICULUM

One recommendation made to the college faculty by the Teacher Education Advisory Committee was to establish four of the instructional systems as courses. This recommendation was made for two major reasons: (1) the instructional systems introduced in the workshops would be readily available to teachers on the island; (2) the instructional systems would remain available until the faculty explored where they belonged in the teacher education program.

As a result of faculty action, approval by the Curriculum Committee of the College of Education, and approval by the Academic and Graduate Councils, the following instructional systems became courses:

Ed. 472, 472 G	Facilitating Inquiry in the Classroom	3 Semester Hours
Ed. 473, 473 G	Developing Cognitive Abilities	3 Semester Hours
Ed. 474, 474 G	Analysis of Pupil-Teacher Interaction	3 Semester Hours
Ed. 471, 471 G	Analysis of Classroom Instruction	6 Semester Hours

Ed. 472 G and Ed. 473 G were offered winter term 1970;

Ed. 474 G and Ed. 471 G were planned for fall term 1970.

#### FIVE-YEAR PLAN FOR DEVELOPMENT OF TEACHER EDUCATION PROGRAM

During the second year of the project, attention was given to the development of a comprehensive teacher education program. Mr. Robert Peryon, a College of Education faculty member, and Laboratory staff worked to accomplish this end.

The flow charts shown in Figures 4-7 were presented to the faculty for their reactions in the spring of 1970. Two sessions of the faculty-student teacher education seminar were devoted to explanation and discussion of the proposed plan. The plan was unanimously accepted by the faculty. The faculty was sufficiently concerned that the plan be implemented to suggest to the dean of the College of Education that a coordinator be selected to assume responsibility for coordinating activities necessary to carry out the plan. Mr. Peryon was elected by the faculty to serve in this coordinating role.

Figure 5 indicates activities carried out and decisions made during the 1969-70 academic year. Some tasks were also begun in the second phrase of the program shown in Figure 6. Box 2.1 in Figure 6 calls for the acquisition of data about the present teacher education program. A rating scale and questionnaire were designed. The instrument was administered at the end of the spring semester of 1970 to students, university supervisors and supervising teachers with whom students were placed. The data gathered represented the beginning of the information gathering stage planned for the next academic year.

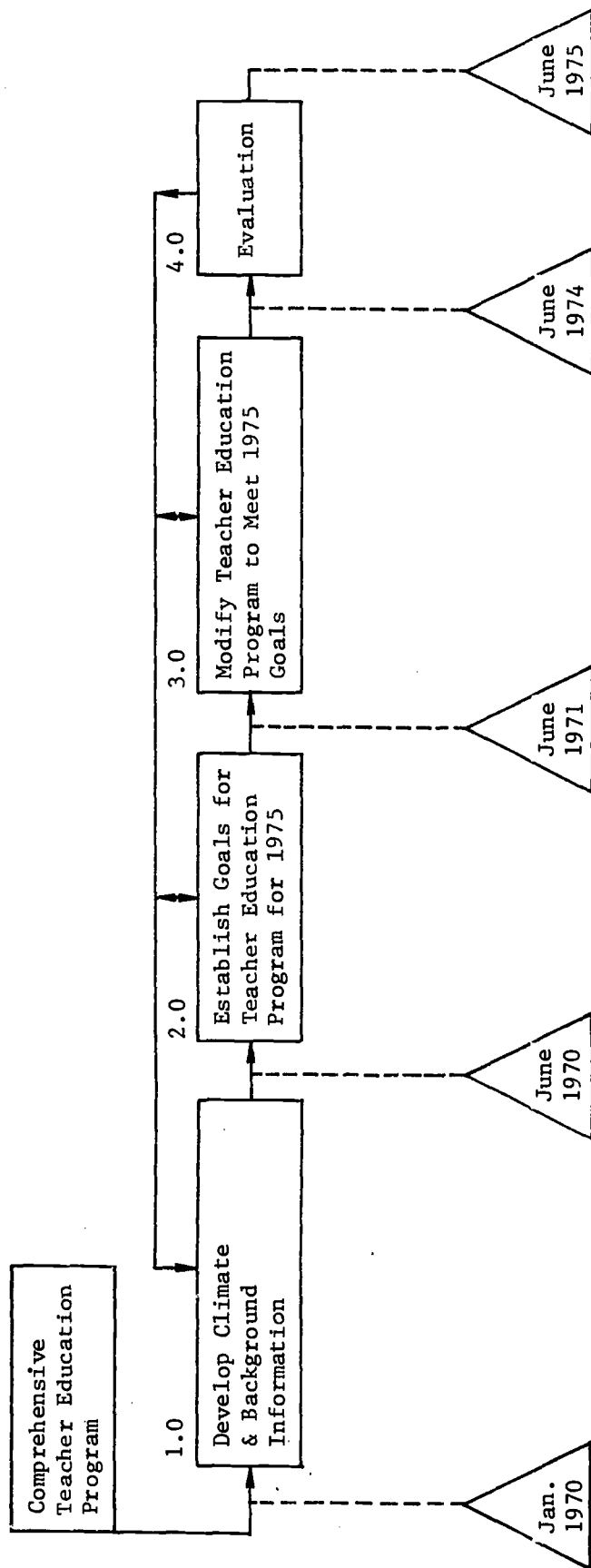


Figure 4

Five-Year Plan for Development of a Comprehensive  
Teacher Education Program

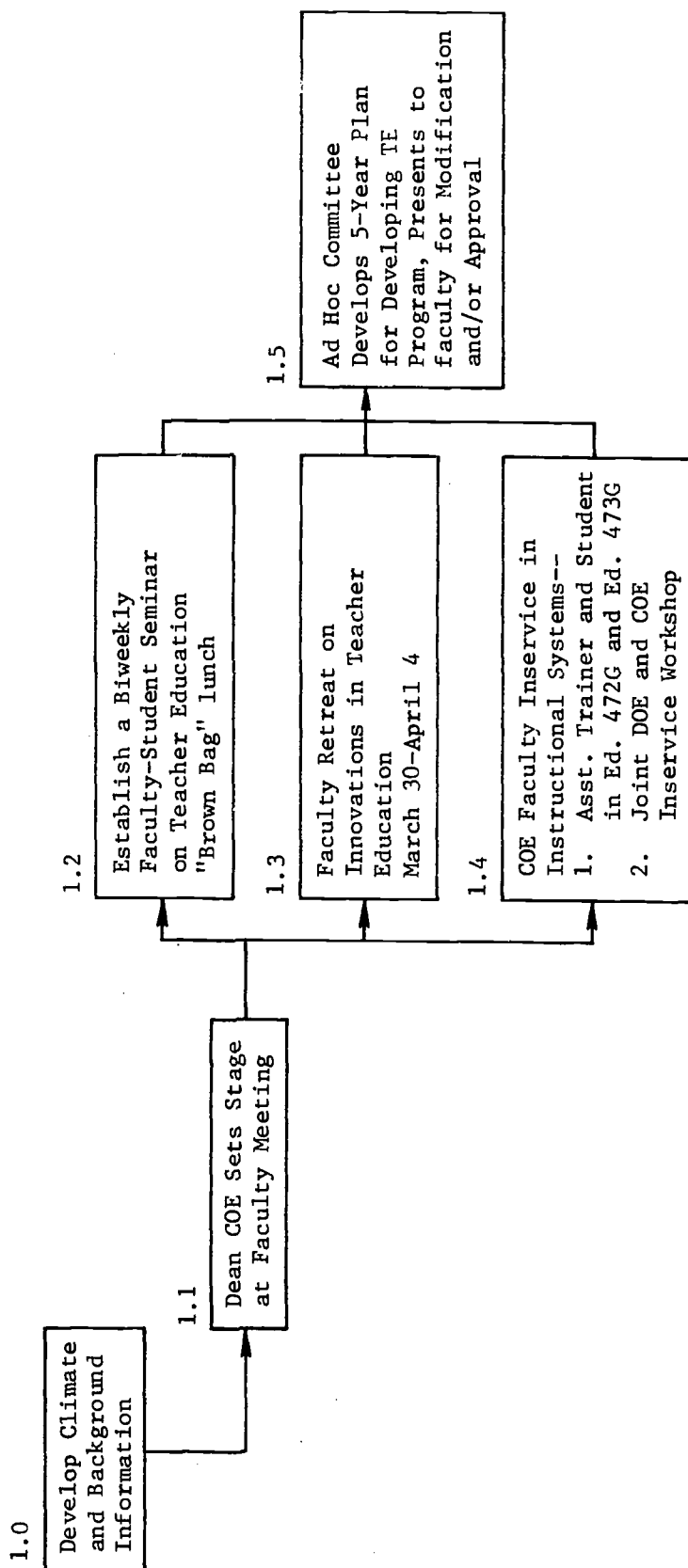


Figure 5

Five Year Plan  
Develop Climate and Background Information

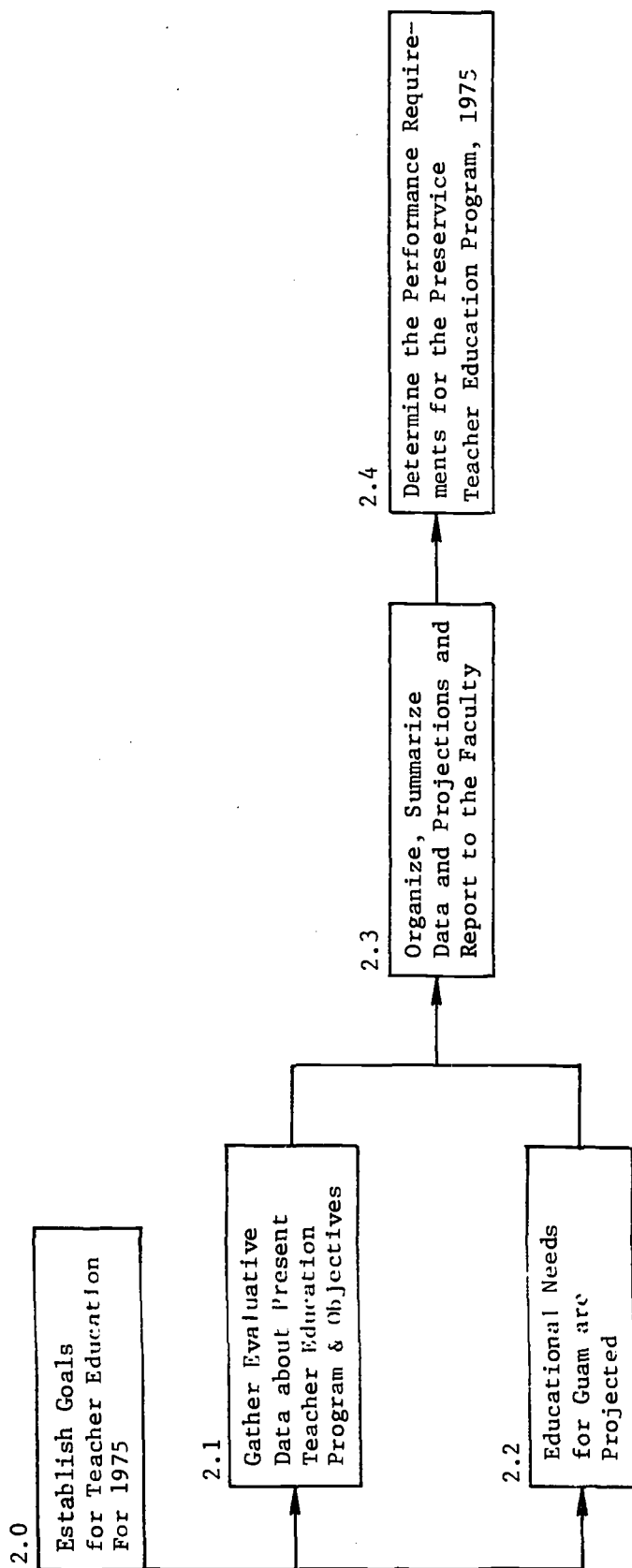


Figure 6  
Five Year Plan  
Establish Goals for Teacher Education Program for 1975

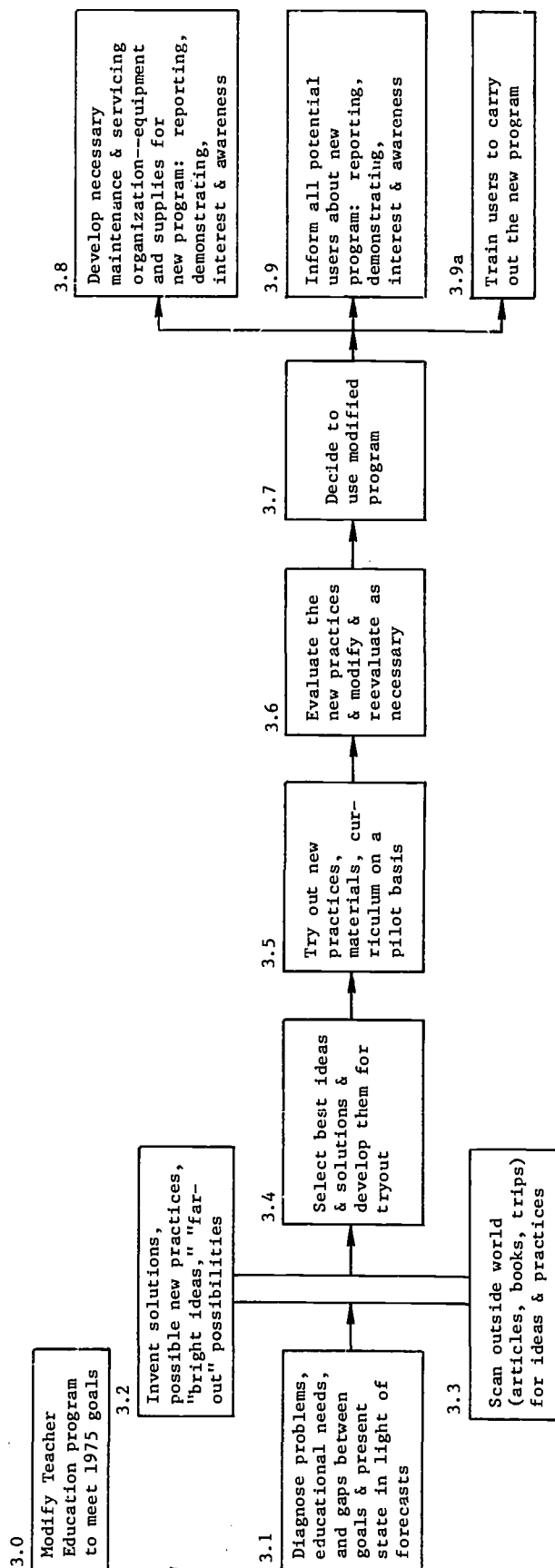


Figure 7  
Five Year Plan  
Modify Teacher Education Program to Meet 1975 Goals

## CHAPTER IV

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The NWREL/Guam Education Project extended over a two-year contract period, 1968-69 and 1969-70. Three main purposes guided the project:

To develop a comprehensive teacher education program

To design and develop an individually prescribed educational program for children, youth and young adults based on the application of systems technology to curriculum development

To establish self-renewing procedures in the Guam educational agencies

The organization of the chapter includes a summary of activities leading to a realization of the above three purposes, conclusions and recommendations.

#### SUMMARY

Development of Teacher Education Program. Work toward the development of a comprehensive teacher education program continued throughout the project. The workshop activities described in Chapter II, utilizing the Laboratory's instructional systems, served as inservice education for Department of Education personnel and University of Guam faculty. Since the workshops served to illustrate curriculum designed to develop teacher competencies, they provided input information to the University faculty. The major objectives of each workshop were aimed toward skill development. Approximately three-fourths of the faculty of the College of Education took part in at least one workshop. Of this group more than half participated in two or more workshops.

Four of the instructional systems have been implemented as courses. Thus, the systems will continue to be available to teachers and college faculty as inservice until their place in a continuous teacher education curriculum can be determined.

During 1969-70 an ad hoc committee, the Teacher Education Advisory Committee, served to advise the dean of the College of Education and the Laboratory project director.

Activities for the year ultimately led to the development and acceptance of a five-year plan that will enable the University to develop a comprehensive teacher education program. A flow chart of the plan is included in Figure 4, Chapter III. A project coordinator was elected by the faculty to coordinate curriculum development activities for next year.



Design and Development of an Individually Prescribed Educational Program. A second purpose listed in the proposal agreement was to design and develop an individually prescribed educational program for children, youth and adults based on the application of systems technology to curriculum development. Activities proposed to the project Coordination and Evaluation Committee, relative to this objective, received low priority. Members of the committee felt other activities were more promising at the moment. The project director felt that more input information to the committee and key personnel in Guam was necessary to make the activity highly profitable. The EPDA proposal relating to the development of an Education Objectives Commission, which was being implemented by the Laboratory concurrently with the Guam Education Project, could provide that input. For this reason, the participation of University faculty and Department of Education consultant personnel, described in Chapter II under the heading "Other Workshop Activities," was stressed.

Establish Self-Renewing Procedures. The self-renewing process was viewed as a series of three stages in professional development to insure that ideas, programs, and materials, introduced on Guam as a part of the NWREL/Guam project, would become a permanent part of the educational enterprise.

Stage 1 is the input stage. Activities that served this function included:

Introduction of the NWREL instructional systems through a series of workshops. Participants were selected because of their leadership potential.

College of Education faculty retreat. Information about trends in teacher education--particularly the nine model comprehensive teacher education programs funded in 1968-69 by USOE--were introduced.

Initiation of the faculty-student seminar (brown-bag luncheons) to discuss teacher education in the College of Education at the University of Guam.

Stage 2 is the followup stage in the self-renewing process. The Guam educators who took part in the instructional systems workshops were selected to serve as assistant trainers. In this role they gained additional competence to eventually become instructors to a wider audience of educators. A Laboratory consultant was on hand to give guidance and assistance in their roles as trainers.

A second type of activity in Stage 2 was the implementation of team teaching in the new course offerings of the Laboratory's instructional systems. The team was composed of the main instructor and a faculty member who had taken the course but never taught it.

Stage 3 is the adoption stage. Guam educators make decisions as to how and where the various ideas, instructional systems, information and/or materials belong in the teacher education program. At the University of Guam the approval of four of the Laboratory instructional systems provides some evidence of adoption activity. The approval of the new

courses should be considered only as a first step because the plans for developing a comprehensive teacher education program are still unfolding. The competencies developed in these courses will be considered in the context of the total program.

At the present time we cannot point to any concrete examples of instructional systems being adopted by the public schools of Guam. No ongoing inservice by the district is planned. Perhaps they assume the competencies introduced will be available from the University of Guam. Most likely, however, is that the individuals selected to participate from the Department of Education come as individuals rather than as teams. Consequently, participants returning did not have the supportive companionship of a fellow participant. Further, there were no followup meetings with the participants from the Department of Education to ask such questions as "Where do we go from here?" Several attempts were made to provide this followup but problems of organization, lack of substitutes, communication and the press of time hampered them. In addition, there are no clear guidelines as to the role of the Department of Education in teacher education. Mr. Tom Thomas, in his evaluative report of the five workshops, presents the only followup information from the schools. (See Appendix A.)

The same followup problems did not occur at the University because those participants were physically located near each other, the College of Education faculty was much smaller and regular faculty meetings were promised.

#### CONCLUSIONS

It is difficult to assess the full extent to which the NWREL/Guam Project affected teacher education in Guam. Certainly some changes did occur and others are in progress. In general, those individuals and agencies who have participated in the project have positive feelings about it. The project evaluations indicated that the Laboratory instructional systems were well received and relevant for Guam. The University faculty is working hard to improve its teacher education program. The groundwork has now been laid to organize and coordinate the development of a comprehensive teacher education program relevant to Guam.

#### RECOMMENDATIONS

1. The faculty of the College of Education should continue its efforts to develop a comprehensive teacher education program.
2. Department of Education personnel should be involved in the College of Education faculty's efforts to develop a comprehensive teacher education program.
3. The Coordination and Evaluation Committee should closely examine the products of the EPDA-sponsored Education Objectives Commission and look to that input for guidelines to design and develop an individually prescribed educational program.

4. The ad hoc committee on teacher education should be continued in its role to advise the dean of the College of Education.
5. The College of Education and the Department of Education should jointly establish clear guidelines as to the role of the Department in continued teacher education.

APPENDIX A

Assessment and Evaluation of  
Five Workshops Conducted  
During the Spring and  
Summer of 1969

GOVERNMENT OF GUAM

Department of Education - University of Guam  
Northwest Regional Educational Laboratory  
Guam Education Project

Assessment and Evaluation of Five  
Workshops Conducted During the  
Spring and Summer of 1969

Tom E. Thomas  
Coordinator of Curriculum and Instruction,  
Secondary

May 1970

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## IDENTIFICATION OF THE PROGRAM AND ITS PURPOSE

### BACKGROUND

In 1965, a group of educators from the Pacific met in Honolulu, Hawaii, and wrote a proposal for a Pacific Basin Regional Laboratory, which was submitted for funding under the Elementary and Secondary Education Act of 1965. Guam, the Trust Territory, Hawaii and Samoa were represented, among others, at the meeting.

The proposal was turned down by the United States Office of Education and, subsequently, the Pacific area educational institutions and agencies were invited to seek assistance from one of the three West Coast educational laboratories. As a result of that invitation, a contract was negotiated between Guam and the Northwest Regional Educational Laboratory (NWREL), located in Portland, Oregon. Laboratory officers visited Guam to write a proposal, which was adopted, with the general objective of providing training to improve teaching on Guam.

Simultaneous with program development was the appointment of a Coordination and Evaluation Committee, composed of two representatives from the University of Guam and two representatives from the Department of Education. A project director was hired and transferred to Guam. The Guam Education Project was officially established in November 1968 with an office located in Agana, Guam.

### DESCRIPTION OF THE PROGRAM

#### PHASE I

The original contract called for one instructional system to be initiated between November 1, 1968 and June 30, 1969, to train 12 participants selected from the University of Guam and the Department of Education. Early in 1969, the Project Director and the Coordination and Evaluation Committee determined that because of high interest in the initial training program and fiscal feasibility, four additional workshops could be offered in the spring of 1969. Following is a description of all five workshops.

#### SYSTEMATIC AND OBJECTIVE ANALYSIS OF INSTRUCTION (SOAI)

To improve instructional processes, teachers must understand what happens in the classroom. Therefore, teachers need to learn skills associated with systematically gathering data on classroom events and objectively analyzing pupil-teacher behavior. The primary objective of SOAI was to provide educators with such skills.

College and classroom supervisors can provide valuable skills for teachers such as planning appropriate teaching goals, collecting data on classroom behavior, analyzing teacher-pupil interaction and planning sound strategies for achieving teaching goals.

SOAI involved four weeks of intensive instruction for educators from the University of Guam and the Department of Education. Instruction in new clinical techniques was provided. The workshop involved continuous cycles of observation and collection of data on teaching. The information was systematically analyzed to show patterns of teaching behavior. This analysis was used to provide teachers with insight into their teaching behavior.

#### DEVELOPMENT OF HIGHER LEVEL THINKING ABILITIES (HLTA)

The explosion of technological and scientific knowledge, together with increasingly complex economic, social and political problems, make it difficult to absorb and remember all important facts and formulas. Society needs people who understand the "whys" and the "hows," not just the "whats". People need to see logical relationships and patterns to solve creatively the problems of tomorrow. New educational techniques make it possible to prepare coming generations to make decisions on the basis of analysis and sound judgment. Instruction of educators in higher level thinking strategies enables them to assist children to become autonomous learners.

Thinking strategies are planned experiences that increase a person's ability to make inferences and predictions beyond the specific information he knows. This involves three tasks: gathering information, categorizing it and then applying the data to draw conclusions and solve problems.

HLTA involved ten days of instruction for representatives from the University of Guam and the Department of Education. The participants received instruction, observed models and practiced their skills in classroom situations. Each participant planned a brief curriculum learning sequence.

#### RESEARCH UTILIZING PROBLEM SOLVING PROCESS (RUPS)

The explosion of knowledge, together with a continuing emphasis on research in all walks of life, makes it imperative that citizens of the future have greater research skills utilizing problem-solving processes. The future for educators is not different. Teachers need to make better use of nationwide and local research.

RUPS was a five-day workshop with the objective of developing several action research skills: (1) formulation of improvement goals; (2) use of data gathering instruments and techniques for diagnosing classroom conditions; (3) derivation of action implications from locally relevant data; (4) design of action-research projects at the classroom and school building levels; (5) use of evaluative assessment instruments; (6) analysis and interpretation of action-research data; and (7) dissemination of results and innovations.

#### ANALYSIS OF PUPIL-TEACHER INTERACTION (IA)

To develop more efficient and effective instruction, teachers must be able to analyze objectively their own and student behavior. No longer is it sufficient for teachers to operate on the basis of



intuition without the benefit of objective information. In order to make sound judgments concerning their classroom actions, teachers must have a means of obtaining actual data and organizing it into systematic and meaningful patterns.

Instruction in interaction analysis provided participants with systematic methods to obtain factual information on pupil-teacher behavior in the classroom, categorize it and analyze the resulting quantified information.

The Interaction Analysis program consisted of five days of instruction for representatives of the University and the Department of Education who received instruction and practiced their skills by coding and analyzing actual samples of classroom activities.

#### INQUIRY DEVELOPMENT (ID)

Behavioral scientists have observed that students depend more and more on an authority, the teacher or the printed word, for the "right answer" as they progress from kindergarten through graduate school.

Researchers have also found that up to 90 percent of class time is now spent on memorization and recall leaving little time for students to classify and generalize, compare and contrast, analyze and synthesize, deduce, infer and evaluate.

Inquiry Development was based on the assumption that concepts are most meaningful and retained longest when the learner actively gathers and processes the basic information.

Inquiry teaching strategies are designed to stimulate students to inquire and seek knowledge for themselves. Participants were instructed in the four main types of action in inquiry: searching, processing, discovering and verifying data.

ID provided representatives of the University of Guam and the Department of Education with ten days of training. Participants received instruction, observed teaching models and watched "live" examples of the processes being demonstrated. Each participant planned brief curriculum sequences including the various facets of the training, conducted inquiry sessions in classrooms and analyzed the results with other members of the group.

All five workshops were offered for graduate credit through the University of Guam, College of Education.

#### PHASE II

A second contract was negotiated that began on July 1, 1969. The bridge between Phase I and Phase II was seen as three stages.

#### STAGE ONE (NOVEMBER 1, 1968 - JUNE 30, 1969)

Five workshops were offered during this period. A Laboratory consultant taught 12 potential trainers from the University of Guam and the Department of Education in each workshop. It was planned for some of the participants to serve as workshop trainers at a later date for either the Department of Education or the University of Guam.

#### STAGE TWO (JULY 1, 1969 - SEPTEMBER 1, 1969)

During the summer of 1969, all five workshops were repeated and open to participants from the University of Guam, the Department of Education and the private schools. Participants from the spring programs were selected to serve as trainers under the direction and assistance of a Laboratory consultant.

It was assumed that selected spring participants could serve as trainers in the summer workshops without significant loss of quality in the program. In order to test this assumption, the spring participants, taught by NWREL consultants, were asked to rate each workshop on the basis of five questions. The summer participants, taught by trainers, were asked to rate each workshop using the same five questions. An analysis of the workshop ratings may be found in Appendix E.

#### STAGE THREE (SEPTEMBER 1, 1969 - JUNE 30, 1970)

The preservice and inservice programs within the University of Guam and the Department of Education were to assume responsibility for continuing the workshops with trainers selected from the participants in the spring and summer programs. The project director was available to assist in the changeover process.

#### DESCRIPTION OF THE PARTICIPANTS IN THE WORKSHOPS

One hundred educators from the Department of Education, the University of Guam and several of the private schools were involved in the five spring and summer workshops. A complete listing of all participants may be found in Table 1.

TABLE 1  
WORKSHOP PARTICIPANTS

	Position time of workshop			Present position			Left Gov. Guam	Spring 1969 Workshops					Summer 1969 Workshops				
	DOE	UG	PS	DOE	UG	PS		SOAI	RUPS	HLTA	ID	IA	SOAI	RUPS	HLTA	ID	IA
ADA, A.P.	ET			EAP											X	X	
AFLAGUE, SR. J.M.			ET		ET										X		
AGUON, K.		I			I				X	X							
AGUON, P.C.	ST			ST													X
AGUON, P.	ST			SAP								X					
APURON, J.	ST			EAP									X			X	
APURON, R.	ET			ET												X	
ARRIOLA, M.P.	ET			ET									X				
BABAUTA, SR. M.A.			ET		ET										X		
BAER, H.		I			I							X				X	
BAER, V.	ET					X										X	X
BARCINAS, J.	SAP			FPC					X								
BARCINAS, T.	SPC			SPC				X									
BARNES, J.	SPC			SPC				X									
BEANS, L.	ST			ST												X	
BELTRAM, L.			ET										X				X
BERNARD, SR. M.			ET		ET											X	
BORJA, V.C.	ST			SP					X								
BOTKIN, P.		I				X		X				X					
CAMACHO, SR. M.J.			ET		ET										X		
CANTWELL, L.K.	ET					X							X				
CARAWAY, A.	PIO				I						X						
CLEVELAND, P.	ST			ST						X							
CLEVELAND, R.	ST			ST						X							
COPELAND, J.	ST			SP									X				
CRISOSTOMO, J.A.	SAP			C					X			X					
CROWELL, M.	ET			ET							X						
DIERKING, H.	ST				I					X							
DUBA, J.			ET	ET											X		
DUNCAN, D.	ST			SPC						X						X	X
DUNN, B.	EP			EP												X	

CODE

DOE:	Department of Education	ST:	Secondary teacher
UOG:	University of Guam	ET:	Elementary teacher
PS:	Private School	I:	Instructor
SOAI:	Systematic and Objective Analysis of Instruction	EP:	Elementary principal
RUPS:	Research Utilizing Problem Solving Process	EAP:	Elementary assistant principal
HLTA:	Development of Higher Level Thinking Abilities	SP:	Secondary principal
I.D.:	Inquiry Development	SAP:	Secondary assistant principal
I.A.:	Analysis of Pupil-Teacher Interaction	SPC:	School program consultant
		PIO:	Public Information Officer
		FPC:	Federal Program Coordinator
		C:	Counselor

TABLE 1 (Continued)

	Position time of workshop			Present position			Left Gov. Guam	Spring 1969 Workshops					Summer 1969 Workshops				
	DOE	UG	PS	DOE	UG	PS		SOAI	RUPS	HLTA	ID	IA	SOAI	RUPS	HLTA	ID	IA
FOSS, A.	ET			ET												X	X
FOSS, R.	ET			ET												X	X
GALLAGHER, J.	ST			SP												X	
GILDAY, S.	ET			ET												X	
HENRICKS, B.	ET			C												X	
HICKMAN, G.	ST			ST												X	
HICE, C.	ET						X						X				X
HIRST, L.	SPC			SPC				X	X	X							
HORN, D.	ET			ET						X			X				X
HUFF, J.	ET			ET													X
KELLY, L.		I			I				X			X					
KEUSS, J.	SAP			SP					X								
KIM, A.	ET						X				X						
LEBORUF, M.J.	ET			ET												X	
LEPSKI, L.	ET						X						X				
LOCKWOOD, E.	ET			ET									X				
LOCKWOOD, R.	ET			ET									X				X
MANIBUSAN, J.	ST			SAP							X						
MARANJO, R.	ET			ET													X
MAURO, D.	SP						X	X									
MAURO, J.	ET			ET						X			X				
McCALL, P.	ET			ET													X
McMULLIN, Sr. A.			ST			SP								X	X		X
MENDIOLA, R.	EP			EP				X									
MESA, E.	ET			ET									X				
MITCHELL, J.	ET			ET													X
MUNA, SR. M.J.			ST			ST											
NEUBER, N.	ET						ET							X	X		
PALACIOS, M.T.	SAP			SAP					X			X					
PAULSON, D.	ET			ET												X	X
PEREZ, Anne				ET			ET							X	X		X
PEREZ, A.				ET			ET										X
PEREZ, T.T.	ST			SPC							X						
PERYON, C.	ST			ST							X						
PERYON, R.		I			I			X	X	X	X	X					
PETERSON, C.	ET			ET												X	
PIERCE, M.	ET						X								X	X	
QUICHOCHO, M.				ET		ET								X	X		X
QUINENE, C.	ET			ET									X				
QUINNELL, G.	ET			ET						X							
QUITANO, R.				ET		ET											X
RECKDAHL, S.	ST			ST							X						
REYES, R.	EP			EP									X				
ROACH, J.	ST			ST													
ROBERTO, M.P.	EP			EP				X								X	
SAN AUGUSTIN, A.	ST			FPC								X					
SAN NICHOLAS, A.S.	ET			ET					X			X					

TABLE 1 (Continued)

	Position time of workshop			Present position			Left Gov. Guam	Spring 1969 Workshops					Summer 1969 Workshops				
	DOE	UG	PS	DOE	UG	PS		SOAI	RUPS	HLTA	ID	IA	SOAI	RUPS	HLTA	ID	IA
SAN NICHOLAS, C.	EP			EP									X				
SELK, B.	ST			C							X						
SIMMERS, E.	ET			ET													X
SMITH, E.	C			C													X
SMITH, W.	ST			ST												X	
SMITH, Z.V.	SAP			SAP										X		X	
STEEN, M.	ET			ET													X
STONE, V.	ET			ET													X
SULLY, P.	ET			ET													X
TAKAHASKI, J.	ET			ET									X				
TANO, C.	ET			ET										X			
TERLAJE, S.		I					X				X	X					
THOMAS, B.	ET			ET											X	X	
THOMAS, T.	SPC			STC				X	X	X	X	X					
TRAIL, D.	SPC				I				X								
TRICE, D.	ET			ET									X				X
VERGARA, J.	ET			ET									X				X
WILSON, A.	EAP			EAP				X									
YUTZY, M.	ET				I					X	X						
Sr. Vincent Marie			ET			ET									X		
McCAULEY, D.	ST			ST													X
McGEE, C.	ET			ET												X	

Table 2 summarizes the participant data according to the number in each workshop from each of the three agencies.

TABLE 2

TOTAL NUMBER OF WORKSHOP PARTICIPANTS ACCORDING  
TO AGENCY, WORKSHOP AND SESSION

	Spring			Summer			Total
	DOE	UOG	PS	DOE	UOG	PS	
SOAI	9	3	-	18	-	-	30
RUPS	9	3	-	3	-	3	18
HLTA	9	2	-	4	-	9	24
ID	10	2	-	18	1	2	33
IA	7	5	-	26	-	3	41
TOTAL	44	15	-	67	1	19	146

Table 3 is a breakdown of Department of Education participants according to their positions at the time of the workshops.

TABLE 3

IDENTIFICATION OF DEPARTMENT OF  
EDUCATION PARTICIPANTS ACCORDING  
TO POSITION AT TIME OF WORKSHOP

Position	Spring					Summer					TOTAL
	SOAI	RUPS	HLTA	ID	IA	SOAI	RUPS	HLTS	ID	IA	
Elem. Teacher	-	-	4	3	1	12	2	4	12	19	57
Elem. Asst. Prin.	1	-	-	-	-	-	-	-	-	-	1
Elem. Principal	3	-	-	-	-	2	-	-	-	-	5
Sec. Teacher	-	2	4	4	3	2	-	-	5	5	25
Sec. Asst. Prin.	-	4	-	-	2	-	1	-	1	1	9
Sec. Principal	1	-	-	-	-	1	-	-	-	-	2
Counselor	-	-	-	-	-	-	-	-	-	1	1
Consultant	4	3	1	2	1	1	-	-	-	-	12
Publ. Info. Officer	-	-	-	1	-	-	-	-	-	-	1
Total	9	9	9	10	7	18	3	4	18	26	113

Table 4 identifies the number of participants involved in one or more of the workshops.

TABLE 4

IDENTIFICATION OF PARTICIPANTS ACCORDING  
TO THE NUMBER OF WORKSHOPS THEY ATTENDED

	AGENCY			
	DOE	UOG	PS	TOTAL
Participants in one workshop	58	-	9	67
Participants in two workshops	18	4	2	24
Participants in three workshops	3	1	3	7
Participants in four workshops	-	-	-	-
Participants in five workshops	1	1	-	2
	80	6	14	100

The summer program had the largest number of participants with 89 while the spring total was 59. Considering both the spring and summer workshops, there were 80 participants from the Department of Education, 6 from the University of Guam and 14 from the private schools.

Most educators in both the spring and summer workshops are in the same position now that they were at the time of the training. Of the 100 participants, 34 have since been transferred, promoted or left the island.

## PARTICIPANT SELECTION

The following procedures were used for selecting participants in the Systematic and Objective Analysis of Instruction (SOAI) workshop:

1. Specifics for the workshop and criteria for participant selection were developed. The overriding criterion was that the participants should have high leadership potential.
2. The Project Director and the Project Coordination and Evaluation Committee asked the Dean of the College of Education to recommend and make the final selection of three participants from the University of Guam and the Deputy Director of the Department of Education was asked to select nine participants from the Department of Education.
3. University selections were made on the basis of personal interviews with prospective candidates by the Dean of the College of Education.
4. Department of Education participants were selected on the basis of applications and recommendations from the principals and consultants.
5. The successful applicants were notified and in all cases accepted. A total of 52 applications were received for the 12 positions.

The four subsequent spring workshops were RUPS, HLTA, ID AND IA. For each workshop, the overriding criterion for selecting participants was their demonstrated leadership potential. Procedures for selecting participants for these workshops were similar to those followed for SOAI.

1. Applications were distributed to all Department of Education professional staff and throughout selected departments at the University of Guam.
2. A total of five information meetings were held at Adelup Elementary, Inarajan Junior High, Dededo Junior High, the University Library and the Department of Education Conference Room to acquaint University and Department of Education personnel with the workshops.
3. The Dean of the College of Education and the Supervisor, Federal Aid to Education, selected six participants from their respective institutions for each workshop.
4. University selections were made on the basis of personal interviews by the Dean. A number of University selections were employees of the Department of Education.
5. The Supervisor, Federal Aid to Education, made selections on the basis of recommendations from the Inservice Training Council based upon the applications that had been submitted.
6. The successful applicants were notified and in a number of cases did not respond. Several alternates were then selected. There were a total of 157 applicants for the 48 positions, about equally divided among the four workshops.

## FINANCING

The two agencies used a combination of federal and local funds to finance the spring and summer workshops.

### PHASE I

November 1, 1968, to June 30, 1969

University of Guam, \$33,000  
Department of Education, \$30,000

### PHASE II

July 1, 1969, to June 30, 1970

University of Guam, \$86,000  
Department of Education, \$25,000

## DESCRIPTION OF THE INSTRUCTIONAL, ADMINISTRATIVE AND SUPPORTIVE STAFFS INVOLVED IN THE WORKSHOPS

### SPRING WORKSHOPS

The Laboratory contracted with consultants to conduct the five spring workshops. Overall planning, coordinating and administering the program was the responsibility of the Director of the Guam Education Project. One full-time secretary and part-time clerical assistance provided the necessary supportive services.

#### Spring Instructors and Support Staff

Dr. James R. Hale, Director, Guam Education Project, NWREL  
Dr. R. Allan Spanjer, Consultant, SOAI  
Dr. John O. Picton, Consultant, RUPS  
Dr. John A. McCollum, Consultant, HLTA  
Mr. Fred E. Newton, Consultant, ID  
Dr. R. Allan Spanjer, Consultant, IA

The consultants were selected because, in each case, they were responsible for or involved in developing the specific instructional system that was taught; and, therefore, they were the most competent and qualified instructors available to conduct the workshops on Guam.

### SUMMER WORKSHOPS

Fourteen trainers for the summer workshops, selected from among the spring participants, were supervised by the five consultants from NWREL who had conducted the earlier workshops. Two of the trainers served in two workshops. The Director of the Guam Education Project planned, coordinated and administered the program and one full-time secretary provided the necessary supportive services.



### Summer Instructors and Trainers

Dr. James R. Hale, Director, Guam Education Project, NWREL  
Dr. John E. Suttle, Laboratory School Coordinator, NWREL

#### SOAI Workshop

Dr. John E. Suttle, Consultant, NWREL  
Mr. Tom E. Thomas, Trainer, Department of Education  
Mr. Allen Wilson, Trainer, Department of Education  
Mr. LeRoy Hirst, Trainer, Department of Education  
Mr. Robert Dunn, Trainer, Department of Education

#### RUPS Workshop

Dr. John O. Picton, Consultant, NWREL  
Mr. Joseph Barcinas, Trainer, Department of Education  
Mr. Jose Crisostomo, Trainer, Department of Education  
Mr. Manuel Palacios, Trainer, Department of Education  
Mr. Robert Peryon, Trainer, University of Guam

#### HLTA Workshop

Dr. John A. McCollum, Consultant, NWREL  
Mr. Robert Peryon, Trainer, University of Guam  
Mrs. Peggy Cleveland, Trainer, Department of Education

#### ID Workshop

Mr. Fred Newton, Consultant, NWREL  
Mrs. Charleen Peryon, Trainers, Department of Education  
Mr. Allen Caraway, Trainer, Department of Education  
Mrs. Sara Reckdahl, Trainer, Department of Education  
Mrs. Bertha Selk, Trainer, Department of Education

#### IA Workshop

Dr. R. Allan Spanjer, Consultant, NWREL  
Mr. Harold Baer, Trainer, University of Guam  
Mr. Manuel Palacios, Trainer, Department of Education

### Staff Development Programs

During the summer workshops, the Laboratory consultants met daily with the trainers to discuss plans and strategies with the objective of preparing them to serve as future trainers for the Department of Education or the University of Guam. In addition, the Laboratory consultants observed the training during the workshop sessions and assisted in planning and evaluating the programs.

DESCRIPTION OF INSTRUCTIONAL MATERIALS, EQUIPMENT AND FACILITIES  
USED IN THE WORKSHOPS

Instructional Materials

SOAI Workshop

Hale, James R. and R. Allan Spanjer. Trainers Manual: Systematic and Objective Analysis of Instruction. Northwest Regional Educational Laboratory: Portland, Oregon, May, 1968.

Spanjer, R. Allan and James R. Hale. Readings for Systematic and Objective Analysis of Instruction. Selected Academic Readings: New York, N.Y., 1969.

Various unpublished materials were distributed to participants as needed.

RUPS Workshop

Fox, Robert, et. al. Diagnosing Classroom Learning Environments. Science, Research Associates, Inc.: Chicago, Ill., 1966.

Jung, Charles, Rene' F. Pino, and Robert Corrigan. Prototype Instructor's Guide: Research Using Problem Solving Processes. Northwest Regional Educational Laboratory: Portland, Oregon, 1968.

Various unpublished materials were distributed to participants as needed.

HLTA Workshop

McCollum, John A. and Rose Marie Davis. Trainers' Manual: Development of Higher Level Thinking Abilities. Northwest Regional Educational Laboratory: Portland, Oregon, 1968.

Various unpublished materials were distributed to participants as needed.

ID Workshop

Newton, Fred. Prototype Instructor's Guide: Facilitating Inquiry in the Classroom. Northwest Regional Educational Laboratory: Portland, Oregon, 1969.

Various unpublished materials were distributed to participants as needed.

IA Workshop

Amidon, Edmund J. and John B. Hough (Eds.). Interaction Analysis: Theory Research and Application. Addison-Wesley Pub. Co.: Palo Alto, Calif., 1967.

Anderson, Robert and John H. Hansen. Prototype Trainers' Manual: Interaction Analysis. Northwest Regional Educational Laboratory: Portland, Oregon, 1969.

Various unpublished materials were distributed to participants as needed.

### Instructional Facilities

The spring workshops were conducted in the NWREL/Guam conference room. However, each workshop required participants to practice their skills and apply their knowledge in actual classroom settings. As a result, several elementary, junior high and senior high school classrooms were also part of the program.

Four of the summer workshops were housed in George Washington Junior High School and the fifth was conducted in St. Jude Junior High School. To provide opportunities for classroom observation and experimentation, laboratory classes were held at Sinajana Elementary and George Washington Senior High School during the regular summer school program. The laboratory schools were organized in cooperation with the Department of Education and financed with project funds.

### DESCRIPTION OF THE MEASURING INSTRUMENTS USED IN PREPARING THIS EVALUATION

#### Initial Evaluation of the Workshops

Each workshop was evaluated at its conclusion by the participants. The same evaluation form, which is attached to this report as Attachment 1, page 54 was used to evaluate all workshops. An evaluation report for the spring workshops may be found in Appendix C, page 61 and the evaluation report for the summer workshops may be found in Appendix D, page 66.

#### Followup Evaluations of the Workshops

The same evaluation form was mailed to the participants with the request that they re-evaluate the workshops in light of their activities and experiences since completing the training. A questionnaire was also sent to the participants along with the evaluation form. A copy of the questionnaire is attached to this report as Attachment 2, page

### FINDINGS

The means of the followup evaluation were calculated for each question and compared with the means from the initial evaluation using the Median Test for Significant Differences. Data regarding the RUPS workshops are not included because so few forms were returned.

It was determined that the 5 percent level of confidence would be used to test for significance. In order to be significant at the .05 level of confidence,  $\chi^2$  must be greater than 3.841. Tables 5 and 6 show a summary of the initial and followup studies.

TABLE 5  
SUMMARY OF INITIAL AND FOLLOWUP EVALUATIONS  
OF SPRING WORKSHOPS

	Mean Workshop Ratings									
	HLTA		IA		ID		SOAI		By Question	
	M1	M2	M1	M2	M1	M2	M1	M2	M1	M2
1. Overall value to participant	9.6	9.6	8.1	8.8	8.1	8.3	8.5	7.8	8.6	8.6
2. Rating compared with other educational courses	9.5	9.9	8.1	8.0	9.9	8.6	8.7	8.6	9.1	8.8
3. Rating compared with other inservice programs	10.0	9.4	8.5	8.0	8.3	9.0	9.0	7.1	9.0	8.4
4. Relevance for Guam educators	9.1	8.9	9.3	7.8	8.1	9.3	8.2	8.9	8.7	8.7
5. Rating as a permanent inservice or preservice program	9.1	9.6	9.4	8.3	8.1	8.9	7.7	8.5	8.6	8.8
By workshop	9.4	9.5	8.7	8.2	8.5	8.8	8.4	8.2	8.8	8.7

(HLTA) Development of Higher Level Thinking Abilities ( $N_1 = 7$ ;  $N_2 = 7$ )

(IA) Analysis of Pupil-Teacher Interaction ( $N_1 = 12$ ;  $N_2 = 6$ )

(ID) Inquiry Development ( $N_1 = 12$ ;  $N_2 = 8$ )

(SOAI) Systematic and Objective Analysis of Instruction ( $N_1 = 11$ ;  $N_2 = 9$ )

(RUPS) Research Utilizing Problem Solving Process. Omitted from study because data were not returned in adequate quantity for computation.

(M<sub>1</sub>) Initial Evaluation

(M<sub>2</sub>) Followup Evaluation

TABLE 6  
SUMMARY OF INITIAL AND FOLLOWUP EVALUATIONS  
OF SUMMER WORKSHOPS

	Mean Workshop Ratings									
	HLTA		IA		ID		SOAI		By Question	
	M1	M2	M1	M2	M1	M2	M1	M2	M1	M2
1. Overall value to participant	10.0	8.2	7.5	5.7	8.1	5.5	9.7	8.5	8.8	7.0
2. Rating compared with other educational courses	9.5	8.8	7.0	5.8	8.2	5.4	9.6	9.7	8.6	7.4
3. Rating compared with other inservice programs	8.9	9.0	6.7	6.3	8.7	6.4	9.5	9.3	8.5	7.8
4. Relevance for Guam educators	9.8	8.2	7.5	5.8	8.2	5.5	9.1	8.8	8.7	7.8
5. Rating as a permanent inservice or pre-service program	9.6	9.2	7.9	6.3	8.1	5.8	9.4	7.8	8.8	7.3
By workshop	9.6	8.7	7.3	6.0	8.3	5.7	9.5	8.8	8.7	7.3

- (HLTA) Development of Higher Level Thinking Abilities ( $N_1 = 8$ ;  $N_2 = 5$ )
- (IA) Analysis of Pupil-Teacher Interaction ( $N_1 = 29$ ;  $N_2 = 9$ )
- (ID) Inquiry Development ( $N_1 = 21$ ;  $N_2 = 8$ )
- (SOAI) Systematic and Objective Analysis of Instruction ( $N_1 = 18$ ;  $N_2 = 4$ )
- (RUPS) Research Utilizing Problem Solving Process. Omitted from study because data were not returned in adequate quantity for computation.
- ( $M_1$ ) Initial Evaluation
- ( $M_2$ ) Followup Evaluation

The hypotheses, calculations and conclusions are shown in the following groups of tables.

Hypothesis I:

The workshop participants will rate each question for all workshops the same on the followup evaluation as they did on the initial evaluation.

TABLE 7  
COMBINED SUMMARY OF MEAN RATINGS ON  
EACH QUESTION FOR INITIAL AND  
FOLLOWUP EVALUATIONS

	Initial (M <sub>1</sub> )		Followup (M <sub>2</sub> )	
	Sum.	Spg.	Sum.	Spg.
1. Overall value to participant	8.8	8.6	7.0	8.6
2. Rating compared with other professional courses	8.6	9.1	7.4	8.8
3. Rating compared with other inservice programs	8.5	9.0	7.8	8.4
4. Relevance for Guam educators	8.7	8.7	7.8	8.7
5. Rating as a permanent inservice or pre-service program	8.8	8.6	7.3	8.8

N = 20  
8.6 < Md < 8.7

TABLE 8  
COMBINED NUMBER OF SIGNS IN A 2 x 2 TABLE  
ON EACH QUESTION FROM INITIAL AND  
FOLLOWUP EVALUATIONS OF ALL WORKSHOPS

	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )	Totals
Above Median	6	3	9
Not Above Median	4	7	11
Totals	10	10	20

$\chi^2 = .808$  with 1df  
N.S. @ .05

Conclusion: The hypothesis is accepted. The workshop participants rated each question for all workshops the same on the followup study as they did on the initial study.

Hypothesis II:

The workshop participants will rate each workshop the same on the followup study as they did on the initial study.

TABLE 9

COMBINED SUMMARY OF MEAN RATINGS  
FOR EACH WORKSHOP FROM INITIAL AND  
FOLLOWUP EVALUATIONS

Workshops	Initial (M <sub>1</sub> )		Followup (M <sub>2</sub> )	
	Spg.	Sum.	Spg.	Sum.
1. HLTA	9.4	9.6	9.5	8.7
2. IA	8.7	7.3	8.2	6.0
3. ID	8.5	8.3	8.8	5.7
4. SOAI	8.4	9.5	8.2	8.8

N = 16

8.5 < Md < 8.7

TABLE 10

COMBINED NUMBER OF SIGNS IN A 2 x 2  
TABLE FROM THE INITIAL AND FOLLOWUP  
EVALUATIONS FOR ALL WORKSHOPS

	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )	Totals
Above Median	4	4	8
Not Above Median	4	4	8
Totals	8	8	16

$\chi^2 = .25$  with idf

N.S. @ .05

Conclusion: The hypothesis is accepted. The participants rated the workshops the same on both the initial and followup evaluations.

Hypothesis III:

In the followup evaluation, the summer workshop participants will rate each question for all four workshops the same as they did on the initial evaluation.

TABLE 11  
SUMMARY OF MEAN RATINGS OF EACH QUESTION  
ON INITIAL AND FOLLOWUP EVALUATIONS  
FOR SUMMER WORKSHOPS

Question	Mean Ratings	
	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )
1. Overall value to participant	8.8	7.0
2. Rating compared with other professional courses	8.6	7.4
3. Rating compared with other inservice programs	8.5	7.8
4. Relevance for Guam educators	8.7	7.8
5. Rating as a permanent inservice or preservice program	8.8	7.3

N = 10  
7.8 < Md < 8.5

TABLE 12  
NUMBER OF SIGNS IN A 2 x 2 TABLE FOR EACH  
QUESTION FROM INITIAL AND FOLLOWUP EVALUATIONS  
OF SUMMER WORKSHOPS

	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )	Totals
Above Median	5	0	5
Not above Median	0	5	5
Totals	5	5	10

$\chi^2 = 6.4$  with 1df  
significant @ .02

Conclusion: The hypothesis is rejected. The summer workshop participants rated each question for all four workshops significantly lower on the followup evaluation than they did on the initial evaluation.



Hypothesis IV:

In the followup study, the summer workshop participants will rate each workshop on all five questions the same as they did on the initial evaluation.

TABLE 13

SUMMARY OF MEAN RATINGS FOR EACH WORKSHOP  
FROM INITIAL AND FOLLOWUP EVALUATIONS  
OF SUMMER WORKSHOPS

Workshops	Mean Ratings	
	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )
1. HLTA	9.6	8.7
2. IA	7.3	6.0
3. ID	8.3	5.7
4. SOAI	9.5	8.8

N = 8

8.3 < Md < 8.7

TABLE 14

NUMBER OF SIGNS IN A 2 x 2 TABLE FOR EACH  
WORKSHOP ON INITIAL AND FOLLOWUP EVALUATIONS  
OF SUMMER WORKSHOPS

	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )	Totals
Above Median	2	2	4
Not Above Median	2	2	4
Totals	4	4	8

$$\chi^2 = \frac{8(4-4/-4)^2}{(4)(4)(4)(4)}$$

$$\chi^2 = .50 \text{ with 1df n.s. @ .05}$$

n.s. @ .05

Conclusion: The hypothesis is accepted. The summer workshop participants rated each workshop on all five questions on the followup evaluation the same as they did on the initial evaluation.

Hypothesis V:

In the followup study, the spring workshop participants will rate each question for all four workshops the same as they did on the initial evaluation.

TABLE 15  
SUMMARY OF MEAN RATINGS OF EACH  
QUESTION ON INITIAL AND  
FOLLOWUP EVALUATIONS  
OF SPRING WORKSHOPS

Question	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )
1. Overall value to participant	8.6	8.6
2. Rating compared with other professional courses	9.1	8.8
3. Rating compared with other inservice programs	9.0	8.4
4. Relevance for Guam educators	8.7	8.7
5. Rating as a permanent inservice or preservice program	8.6	8.8

N = 10  
8.6 < Md < 8.8

TABLE 16  
NUMBER OF SIGNS IN A 2 x 2 TABLE FOR EACH  
QUESTION ON INITIAL AND FOLLOWUP EVALUATIONS  
OF SPRING WORKSHOPS

	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )	Totals
Above Median	2	2	4
Not Above Median	3	3	6
Totals	5	5	10

$\chi^2 = .416$  1df  
n.s. @ .05

Conclusion: The hypothesis is accepted. The spring workshop participants rated each question on the followup evaluation the same as they did on the initial evaluation.

Hypothesis VI:

In the followup study, the spring participants will rate each workshop the same as they did on the initial evaluation at the time the workshop was conducted.

TABLE 17  
SUMMARY OF MEAN RATINGS FOR  
EACH WORKSHOP FROM INITIAL AND  
FOLLOWUP EVALUATIONS  
OF SPRING WORKSHOPS

Workshop	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )
1. HLTA	9.4	9.5
2. IA	8.7	8.2
3. ID	8.5	8.8
4. SOAI	8.4	8.2

N = 8  
8.5 < Md < 8.7

TABLE 18  
NUMBER OF SIGNS IN A 2 x 2  
TABLE FOR EACH WORKSHOP ON INITIAL  
AND FOLLOWUP EVALUATIONS  
OF SPRING WORKSHOPS

	Initial (M <sub>1</sub> )	Followup (M <sub>2</sub> )	Totals
Above Median	2	2	4
Not Above Median	2	2	4
Totals	4	4	8

$\chi^2 = .50$  with 1df  
n.s. @ .05

Conclusion: The hypothesis is accepted. The spring workshop participants rated each workshop on all five questions the same on the followup evaluation as they did on the initial evaluation.

Participants were asked to indicate how they felt they benefited most from training. A summary of their reactions is found in Table 19.

TABLE 19

	SOAI	IA	ID	HLTA
Improved teaching	5	7	11	11
Improved supervision	11	7	5	4
Improved administration	3	2	1	-
Helping other teachers	7	7	9	10
Helping other supervisors	3	2	1	1
Helping administrators	-	2	1	2

#### PARTICIPANT COMMENTS

Workshop participants were asked to add any comments they felt would contribute to a more complete evaluation of the workshops. Comments are quoted here according to workshop.

##### HIGHER LEVEL THINKING ABILITIES

"Some new ideas on questioning and development of lesson plans. Much needed on Guam."

"We need better group arrangement. Some groups have better chance to produce than others due to better group membership."

"Because of changes in my techniques of questioning students, drawing out comparisons and conclusions in areas of thinking, several colleagues have asked for my 'secret formula'."

"I feel the many excellent suggestions and concrete ideas learned in the workshop have made me a much more effective teacher. It was a pleasure to attend and to share the ideas learned with teachers who have had difficulty in this area."

"Created interest in learning more about educational learning theories."

"(I have) used these methods and ideas extensively in working with other teachers."

"This workshop was just excellent considering the time. The workshop was too short but we accomplished a lot."

"This workshop would be good if held during the school year so you can try the approaches with your own class."

"This was an excellent course because the instructor knew his material."

"It's a good program."

"This was my first NWREL course and when I was finished I felt I had gotten something from the course."

"I think it was very worthwhile and a great help in my teaching."

"I feel there should be some kind of followup workshops during the year to clear up any questions we might have come up with."

#### SYSTEMATIC AND OBJECTIVE ANALYSIS OF INSTRUCTION

"I feel the workshop provided valuable experiences for educators. It helped me to understand the importance of understanding how a group works, what our responsibilities and objectives are and the qualities of good leadership. I recommend it for all teachers and principals."

"I wish there were time to utilize these skills more."

"Being a trainer helped me to work with individuals on my staff during the following school year."

"I would need more than two weeks to teach a course like that."

"Good course. I think there is some repetition and the course could be shortened and still attain the same ends. I found myself getting bored with the same routine here at Sinajana and during the sessions."

"Opportunities for those not in supervision to utilize the training are limited."

"Use student teachers in the lab classes instead of those who have been teaching. A meeting of those teaching in the lab classes and those taking the workshop before observation takes place so that everyone is aware of his responsibility as well as that of the other group."

"(I) have been assigned a student teacher so it has helped her more efficiently in preparing her for her first year of teaching experience."

"Feel I should take other courses related to it before I feel confident to qualify as a trainer."

"Would enjoy meeting the other participants again for an open discussion if at all possible. I feel we can have, then, a very thorough evaluation."

#### INQUIRY DEVELOPMENT

"Workshop too short and not enough time to work on the methods."

"It did not help me at all."

"The idea of developing inquiry is good. The way this course is organized is not good. It violates sound teaching practices. It is too complex to apply as it now stands, especially for non-science teachers."

"It didn't change my method after all."

"Inquiry development is not applicable in all the subjects taught in school. Even more difficult for the very low level."

"Helped me to be more critical of personal methods of inquiry."

"An interesting teaching method - not particularly expandable to counseling on Guam."

"It was great."

#### INTERACTION ANALYSIS

"This workshop is very good but it is too short to accomplish all of it."

"I benefited in other areas than just the educational field."

"Your trainers need more training."

"The program is a good one, but the students are put into training too soon."

"Could be most effective when used by an evaluator (principal) in charting pupil-teacher interaction."

"Would be more useful in an adm. curriculum rather than education. Unfortunately, there appears to be few administrators on Guam interested in administration courses."

"It helps teachers to be more cautious and focus on students' participation rather than lectures."

"Teachers who learned the course should continue on mastery lest they forget."

"Teachers should use this method of evaluation more often to be beneficial."

"One week was a very short time."

"The course didn't last long enough or go indepth enough to actually change."

"The trainers in our workshop were unsure of the material and oft times could not answer our questions."

"I haven't analysed my teaching, but since the course I have a bigger awareness of purpose in a certain lesson."

"Interesting - but not as vital as others."

"While valuable, this program seems to lack something. Does not appear to be a powerful tool in analyzing classroom behaviors."

"Best for use with experienced teachers."

"Best for use with persons who will remain on Guam."

"Best for use with persons whose supervisors have indicated this skill will be used in that school."

"It should be required course for teachers and administrators attending Guam University."

"Our compliments to NWREL for a job well done."

#### RESEARCH UTILIZING PROBLEM SOLVING

"This workshop is very good. It helped me to solve my own problem in the classroom."

"I wish this workshop will be longer than what was done during summer."

"Applicable both to teaching and supervision."

"All teachers/instructors and administrators will benefit if they apply these principles."

"All supervisors and administrators should have the opportunity to take this one - maybe require them to take it."

## SUMMARY AND RECOMMENDATIONS

### SUMMARY

The workshops were selected with the general objective of improving teaching on Guam. One hundred educators from the Department of Education, the University of Guam and the private schools participated in one or more of the five workshops which were conducted during the spring and summer of 1969 and financed with local and federal funds.

According to participants' evaluations, the overwhelming majority felt the workshops were valuable to them personally; rated high compared to other professional education courses; rated high compared to other inservice training courses; rated high in terms of relevance for Guam; and, rated high as permanent inservice or preservice programs for Guam, either at the University of Guam or within the Department of Education.

Most participants felt the training was primarily beneficial in helping them to improve their teaching while others felt the workshops taught them how to help other supervisors or improved their own supervisory abilities.

The data makes it difficult to generalize about the workshops' impact on the University of Guam instructors because of the limited number of University participants. But, the fact that the workshops' contents have become a part of the teacher-training curriculum at the University is significant in terms of training future teachers for Guam's schools.

The Department of Education had the largest number of participants in the workshops followed by the private schools and the University of Guam. A majority of Department participants were teachers with over half of that group from the elementary schools.

Only the Department of Education and the University of Guam participated in the spring workshops; participants from the private schools were in the summer workshops.

Spring participants were selected because of their demonstrated leadership potential or because they held leadership positions. While most of them were either administrators or supervisors, the summer participants were largely elementary and secondary teachers. Participants were given released time to attend the training program.

The workshop in Analysis of Pupil-Teacher Interaction (IA) had the largest number of participants followed in order by Inquiry Development (ID), Systematic and Objective Analysis of Instruction (SOAI), Higher Level Thinking Abilities (HLTA) and Research Using Problem Solving (RUPS).

Most Department of Education participants were involved in only one workshop while all six from the University took part in two or more of the training programs. Most participants are still employed by the Government of Guam and the majority are in the same position now that they held at the time of the training. Seven participants have left the Department of Education of which four transferred to the University; two University participants are no longer with that institution.



A specific objective of the spring workshops was to prepare future trainers for the Department of Education and the University of Guam. From the spring group, 14 were selected to serve as trainers in the summer workshops and, according to the evaluations, with no significant loss of quality in the program.

The entire training program required communication and cooperation between the Department of Education, the University of Guam and the Northwest Laboratory. This was accomplished through the appointment of a joint committee involving all three agencies.

Although the workshops' contents have been adopted as a part of the teacher-training curriculum at the University, there is no followup inservice training program within the Department of Education. It is not clear from the data if this is the result of a lack of coordination between the University and the Department, or if the Department has simply not followed through with its original plans. The experienced trainers in the schools have not been training others on a systematic basis during this school year.

Although participants rated the workshops high on the initial and followup evaluations, there were some differences among the ratings. HLTA was rated the highest of the spring workshops and SOAI highest among the summer workshops. Their relative positions did not change on the followup evaluations.

The only significant difference in ratings is between the summer participants' initial and followup evaluations; they rated each question significantly lower on the followup evaluation than they did on the initial evaluation. Summer participants apparently found the skills and knowledge less useful upon returning to the classroom than they felt they would be at the conclusion of the workshops. Because of incomplete data, it is difficult to analyze this phenomenon; however, some hypotheses can be made.

1. While spring participants, primarily administrators and supervisors, were selected because of their demonstrated or potential leadership abilities, summer participants, mostly classroom teachers, were selected on a first-come-first-served basis. It is possible that the summer participants did not have the opportunity to use those skills that were primarily of an administrative or supervisory nature and, therefore, found them less valuable.
2. The limited number of returns from the summer followup evaluation may have caused the sample to present an inaccurate representation of participant attitude.
3. The summer workshops may have had less long term impact because they were taught by Guam trainers instead of Laboratory consultants.
4. Competing social and recreational activities during the summer may have prevented the trainers and participants from devoting their full energies and efforts to the training and, therefore, kept them from receiving maximum long term benefits.

## RECOMMENDATIONS

It is apparent from the participants' evaluation that training programs similar to these five workshops should continue to be a part of the staff development plans of the Department of Education and the teacher-training curriculum at the University. However, the data indicates that long-range planning by the department is necessary if an integrated, system-wide staff development program is to be implemented. Inadequate planning may lead to piecemeal, stop-gap programs that fail to achieve their purposes. Program continuity is essential if improved teaching is expected and particularly if long range goals are to be achieved. Followup activities should be identified early in the developmental stage of all future programs.

### Specific Recommendations

1. Continue to work cooperatively with the University of Guam and the Laboratory in improving Guam's schools through inservice training programs.
2. Assess staff development needs throughout the district and establish a priority listing for future inservice training programs. Fully utilize the staff trained in these workshops to train others within the district.
3. Review the policy that prevents the Department of Education from scheduling courses for inservice credit that are being offered by the University of Guam.
4. Require principals to initiate inservice training programs in their individual schools and to fully utilize the members of their staff trained in these workshops.
5. Provide local funds for staff development programs planned and implemented by personnel within the Department of Education.
6. Continue to articulate staff development programs between the Department of Education and the University of Guam.
7. Continue to select workshop participants on the basis of their anticipated length of stay on Guam following the program.
8. Continue to involve participants from both the University and the Department of Education in the same training programs.
9. Request that participants evaluate all training programs that are sponsored by the Department of Education.
10. Continue to involve teachers, supervisors and administrators in the same training programs.
11. Continue to provide released time for staff development.
12. Continue to evaluate all programs to determine if they are achieving their objectives and if they are improving Guam's educational system.

APPENDIX A  
ATTACHMENT 1

DEPARTMENT OF EDUCATION - UNIVERSITY OF GUAM  
NORTHWEST REGIONAL EDUCATIONAL LABORATORY  
GUAM EDUCATION PROJECT

PARTICIPANT EVALUATION FORM

The purpose of this questionnaire is to obtain opinions from participants regarding the 1968-69 workshops conducted by NWREL. This form is similar to the one completed by participants at the end of each workshop. The purpose of using the questions from the previous evaluation form is to determine the extent to which you feel the training has affected your performance as determined by your experiences and activities on the job since completing the training.

Complete a Participant Evaluation Form for each workshop in which you were a participant. Please return this completed form to:

Tom E. Thomas  
Department of Education  
P. O. Box DE  
Agana, Guam 96910

OR

Robert Peryon  
University of Guam  
P. O. Box EK  
Agana, Guam 96910

- 
- A horizontal scale from 1 to 10. Above the numbers are three labels: "Very Low" above 1, "So So" between 6 and 7, and "Very High" above 9.

- Very Low                      So So                      Very High
- '     '     '     '     '     '     '     '     '     '
- 1    2    3    4    5    6    7    8    9    10

- 
- Very Low                      So So                      Very High
- |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|

- |          |   |   |   |   |   |       |   |   |    |           |
|----------|---|---|---|---|---|-------|---|---|----|-----------|
| Very Low |   |   |   |   |   | So So |   |   |    | Very High |
| 1        | 2 | 3 | 4 | 5 | 6 | 7     | 8 | 9 | 10 |           |

- Very Low    So So    Very High
- '        '                '                '                '                '                '                '                '                '
- 1      2      3      4      5      6      7      8      9      10

7

APPENDIX A  
ATTACHMENT 2

DEPARTMENT OF EDUCATION - UNIVERSITY OF GUAM  
NORTHWEST REGIONAL EDUCATIONAL LABORATORY  
GUAM EDUCATION PROJECT

Dear Participant:

The attached questionnaires are part of an island-wide study being carried on cooperatively by the University of Guam, the Department of Education and the Northwest Regional Educational Laboratory to assess and evaluate the educational effects of the workshops conducted by NWREL during the Spring and Summer of 1969. The results of this study may be used to determine ways of improving the teacher education programs on the island.

As a participant in one or more of the workshops, you are requested to complete both questionnaires, which have been tested with a sampling of workshop participants and revised to make it possible to obtain all necessary data while requiring a minimum of your time.

It will be appreciated if you complete and return the forms by April 15, 1970. Other phases of this study cannot be started until analysis of the questionnaire data has been completed.

Your comments regarding any aspect of the workshops not covered in the questionnaires will be welcomed. Results of this study will be available before the end of this school year.

If you have any questions, contact either one of us.

Thank you for your cooperation.

TOM E. THOMAS  
Department of Education  
P. O. Box DE  
Agana, Guam 96910

ROBERT PERYON  
University of Guam  
P. O. Box EK  
Agana, Guam 96910

# PARTICIPANT QUESTIONNAIRE

1. Name of Workshop \_\_\_\_\_ Spring 1969 Workshop ☐  
 Summer 1969 Workshop

2. Present Position:

Position at time of workshop

Department of Education ☐

Department of Education ☐

University of Guam - Inst. ☐

University of Guam - Inst. ☐

Adm. ☐

Adm. ☐

Teacher - Elementary ☐

Teacher - Elementary ☐

Secondary ☐

Secondary ☐

Consultant ☐

Consultant ☐

Secondary Administration ☐

Secondary Administration ☐

Elementary Administration ☐

Elementary Administration ☐

Other ☐

Other ☐

3. Years of teaching (supervision or administration) on Guam:

1 yr. ☐ 2 yrs. ☐ 3 yrs. ☐ 4 yrs. ☐ 5 yrs. ☐

Over 5 yrs. ☐

4. Total number of years of teaching (supervision or administration) both on and off of Guam:

1 yr. ☐ 2 yrs. ☐ 3 yrs. ☐ 4 yrs. ☐ 5 yrs. ☐

Over 5 yrs. ☐

5. Contract Status:

Off-island Contact ☐

Local Hire (Permanent resident) ☐

Local Hire (Dependent of off-island contract employee) ☐

Local Hire (Dependent of military or civil service employee) ☐

Other ☐

6. Sex:                      Male                      Female

7. Indicate by a checkmark the ways that you feel you benefited most from the training. You may check more than one item.

Improved teaching	<input type="checkbox"/>
Improved supervision	<input type="checkbox"/>
Improved administration	<input type="checkbox"/>
Helping other teachers	<input type="checkbox"/>
Helping other supervisors	<input type="checkbox"/>
Helping administrators	<input type="checkbox"/>
Other _____	<input type="checkbox"/>

Comments: \_\_\_\_\_

8. Indicate the number of times you have been a trainer in this program since completing the workshop. \_\_\_\_\_

Comments: \_\_\_\_\_

9. Indicate by checkmark those for whom you have provided training as a result of this workshop.

Teachers/Instructors	<input type="checkbox"/>
Supervisors	<input type="checkbox"/>
Administrators	<input type="checkbox"/>
None	<input type="checkbox"/>
Other _____	<input type="checkbox"/>

Comments: \_\_\_\_\_

10. Add any comments that you feel will contribute to a complete evaluation of this workshop.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

APPENDIX B

Questioning Strategies  
Instructional System



## Questioning Strategies Leading to Productive Thinking

### Need

Much of the classroom interaction between teachers and students is in the form of questions and answers. For students to build an understanding of the concept being discussed, they need to focus attention on the topic over a period of time. They also must be able to respond to many styles of questions at different levels of abstraction.

### Purpose

Instruction of teachers in styles of questioning enables them to lead children into more productive thinking.

Teachers learn five basic styles of questioning and develop an understanding of different levels of abstraction in each.

They also learn a system of analysis to determine the effectiveness of their planned questioning strategy.

### Program

A five day workshop to provide instruction for a group of some 20 educators.

APPENDIX C

University of Guam  
Department of Education  
Northwest Regional Educational Laboratory

Guam Education Project  
Teacher Education Program

EVALUATION REPORT  
LEADERSHIP TRAINING WORKSHOPS  
SPRING 1969

Allen E. Caraway

June 20, 1969

## EVALUATION REPORT ON THE NWREL LEADERSHIP TRAINING WORKSHOPS: SPRING 1969.

Late in the first semester, 1968, and throughout most of the second semester, 1969, the Northwest Regional Educational Laboratory of Portland, Oregon, held a series of five leadership training workshops for Guam educators. The venture was co-sponsored by the Guam Department of Education and the University of Guam and the participants in the workshops included representatives from both organizations.

In May, 1969, an evaluation form was distributed to all of the workshop participants and each person was asked to complete the form and return it to the Department of Education Public Relations Office for tabulation. The number of participants who responded was high and so were their ratings.

All 12 of the participants in two workshops (Interaction Analysis and Inquiry Development) completed and returned the evaluation sheet. Eleven of the 12 participants in Systematic and Objective Analysis of Instruction responded. Ten of the 12 participants in Research Utilizing Problem Solving Process responded. Finally, 7 of the 11 participants in Development of Higher Level Thinking Abilities responded.

In order to evaluate each of the workshops, a mean was determined for each of the five items on the evaluation form which the participants submitted. A mean for the workshop itself was then determined using the mean for each of the five items. Thus, the mean for the Higher Level Thinking Abilities workshop was 9.4. The second highest ranking workshop was Interaction Analysis which had a mean of 8.7. Inquiry Development ranked third among the five workshops with a mean of 8.5. Systematic and Objective Analysis of Instruction scored 8.4 and Research Utilizing Problem Solving Process has a score of 8.3.

In addition to the obviously high mean scores for each of the five workshops, the ratings from each of the participants were also uniformly high. Only one respondent rated any of the items with a 4 and this response was given in answer to questions 4 and 5 which attempt to determine the workshops' relevance. It is even more unusual to note that among the 52 evaluation sheets (with their total of 260 responses) only five participants ranked an item as low as 5 and these "so so" ratings were limited to one or two items.

As might have been expected, the written comments solicited at the bottom of the rating sheet were as enthusiastic as the numerical ratings. Generally, the participants were pleased with the training they received. However, they also felt that their administrators should take the same training in order to understand its purposes and its potential. Also, many of the respondents felt that all teachers in the system should have the same training. Finally, several of the respondents were apparently reacting to an unpleasant experience with book salesmen when they said that they appreciated the workshop because the instructor wasn't "trying to sell something."

## COMMENTS FROM PARTICIPANTS

### DEVELOPMENT OF HIGHER LEVEL THINKING ABILITIES

1. This was the best and most effective workshop I have attended in 20 years. Thanks for making my future teaching easier, happier, and better in every way. My pupils will never thank you enough.
2. This program is excellent -- it should be continued on Guam until every teacher has a chance to take it.
3. In my opinion, this was not only the best workshop I ever attended, but it was also an excellent educational course in that the instructor was not attempting to "sell books or other merchandise" and instead showed a thorough knowledge of material that he presented.
4. Instead of having the workshops given by book company representatives or their like, a course like this could be offered or a mini version of it for one or two days.

### INQUIRY DEVELOPMENT

1. This will be effective to the degree that the instructor is effective.
2. Depending on how receptive a person is, it would be extremely valuable. A very challenging experience.
3. ...more classroom teachers should be considered for this particular workshop.

### INTERACTION ANALYSIS

1. (Need) complete manual
2. (Need) longer training period
3. (Need) more field work

### SYSTEMATIC AND OBJECTIVE ANALYSIS OF INSTRUCTION

1. The secret is to get teachers and Department heads involved, then give them time during the day to spend in a cooperative working relationship.
2. (The program should be permanent) only if the Board of Education and Director actually know what this is about. The professional teacher, the one who wants to be told what to do, how to do it, and then be evaluated can hardly profit from it so long as attitudes don't change also.

#### RESEARCH UTILIZING PROBLEM SOLVING PROCESS

1. Administrators should take this inservice (training). They are the leaders in the schools, they must be sold on it to have teachers utilize these tools.
2. (I) gained many new insights into classroom procedures, interpersonal relations and RUPS as a process.
3. Make it a part of the teacher training curriculum.

TABLE 1  
Summary

Questions	Workshop Ratings				
	HLTA	I.A.	I.D.	SOAI	RUPS
1. Overall value to participant	9.6	8.1	8.1	8.5	8.4
2. Rating compared with other educational courses	9.5	8.1	9.9	8.7	8.4
3. Rating compared with other inservice programs	10	8.5	8.3	9	7.1
4. Relevance for Guam educators	9.1	9.3	8.1	8.2	8.8
5. Rating as a permanent inservice or preservice program	9.1	9.4	8.1	7.7	8.8
	9.4	8.7	8.5	8.4	8.3

Mean score

1. Development of Higher Level Thinking Abilities
2. Analysis of Pupil-Teacher Interaction
3. Inquiry Development
4. Systematic and Objective Analysis of Instruction
5. Research Utilizing Problem Solving Process

APPENDIX D

University of Guam  
Department of Education  
Northwest Regional Educational Laboratory

GUAM EDUCATION PROJECT  
TEACHER EDUCATION PROGRAM

Evaluation Report  
Northwest Regional Educational Laboratory  
Teacher Training Workshops  
Summer 1969

Allen E. Caraway

March 1, 1970

## EVALUATION REPORT ON THE NWREL TEACHER TRAINING WORKSHOPS: SUMMER 1969.

The following is an evaluation report for a series of educational workshops conducted by Guam trainees under the direction of the Northwest Regional Educational Laboratory during the summer of 1969. These workshops were titled Systematic and Objective Analysis of Instruction, (SOAI); Research Utilizing Problem Solving, (RUPS); Higher Level Thinking Abilities, (HLTA); Inquiry Development, (ID); and Analysis of Teacher-Pupil Interaction, (IA).

This report is based on an analysis of a questionnaire which was distributed to all of the participants at the conclusion of each workshop.

On the questionnaire each participant was asked to rate the workshop: (1) on its overall value to the participant; (2) on its value compared to other professional education courses; (3) on its value compared to other inservice programs; (4) on its value in terms of relevance to Guam; and (5) on its value as a permanent inservice or preservice program for Guam.

The participants responded to each of the five questions by marking a rating scale with numerical choices ranging from one (1) to ten (10). Number one (1) was clearly labeled "very low," the midpoint of the scale was labeled "so-so," and the high point (10) was labeled "very high."

In addition to the five questions, the questionnaire also included a blank space in which the participants could record comments about the workshop. Of the 29 participants in the IA group who returned the questionnaire, 17 included personal comments about the workshop. A total of 14 participants from the group of 21 respondents in ID recorded comments. Fifty percent of the SOAI respondents commented on the workshop (9 of 18). All eight HLTA respondents included personal comments and so did two of the three respondents from RUPS.

These personal comments were of particular value in interpreting the mean score for each of the five questions as well as the mean score for each of the workshops.

Since the workshop participants responded to the questionnaire by assigning a numerical rating for the workshop on five different items, a numerical average or mean was calculated for each of the five items. Likewise, an average score was computed for each of the workshops by using the mean scores for each of the five items.

Generally, all five workshops received high ratings from the participants. With the highest possible score being a 10.0, the highest actual rating was a 9.56. The second highest rating assigned by the participants was a 9.44. The third highest rating was 8.25; the fourth highest was 7.31. The lowest rating was 5.59; however, there were only three participants in the workshop who responded to that questionnaire and since two respondents gave the workshop a very high rating and one gave it a very low rating, a valid evaluation could not be determined.



The workshop receiving the highest rating was HLTA which received a rating of 9.56. As might be expected, the individual ratings for each of the five items on the questionnaire were consistently high. In fact, the lowest individual rating from any participant on any item was a score of 5 and it was given in response to item 3 (how would you rate this workshop as compared to other inservice programs...).

The comments on the questionnaires indicate that the participants were pleased with the material presented in the workshop and with the manner in which it was presented. A number of comments also indicated that the participants felt the course was relevant for Guam and that it should have been offered at a time when more people could (and would) participate. Several respondents also suggested that the workshop be offered for a longer period of time.

The workshop with the second highest rating was SOAI (9.44). Like HLTA, the lowest individual rating on any of the five items was a 5. From the individual comments on the questionnaires, however, it is apparent that the SOAI participants were concerned with the manner in which the workshop was taught. Several respondents implied that a more practical laboratory classroom could be created using student teachers. It is also interesting to note that many of the SOAI participants commented that the workshop should be required for all teachers on Guam.

The workshop with the third highest average was ID (8.25). Since this figure is an average of all the scores, it should be pointed out that there was a dichotomy in the ID ratings that did not appear in the other three large workshops.

Of the 21 respondents from the ID workshop, there were two who did not assign a rating higher than 5 for any of the five items. One other respondent gave the workshop a rating of 1 (very low) on the item concerning ID's overall value to the participant, but then gave the workshop a rating of 5 on the item comparing it to other education courses and a 10 on the item comparing ID to other inservice programs. The other 18 respondents gave the workshop consistently high ratings on all five items with the lowest individual score being a 6.

The individual comments on the ID rating sheets raise several points which might be considered when revising the instructional material. First, several of the participants were concerned because most of the class models were scientifically oriented. Second, several participants implied that the demonstration tape recordings would be more effective if local children were included.

The IA workshop received an average rating of 7.31 from the 29 respondents and had the greatest distribution of scores on all five items of the questionnaire. The individual comments on the questionnaires indicate that most of the respondents felt that the workshop was valuable and that the course was relevant for Guam. On the other hand, one-third of the respondents criticized the instruction they received: one respondent felt that the final test was unfair, several respondents felt that class discussions

became confused when the student instructors contradicted each other, and several other respondents suggested that the student instructors were not familiar enough with the material they were trying to present.

As mentioned previously, only three participants in the RUPS workshop returned the questionnaire and two of the respondents gave the workshop a relatively high rating while the other gave it a very low rating. Considered separately, the two respondents gave the workshop a rating of 7.5 and the other respondent gave it a rating of 1.5. There were only two personal comments from RUPS respondents, and the comments are just as confusing as the numerical ratings--one respondent said that the workshop was too brief and the other respondent said it was too long.

#### COMMENTS FROM PARTICIPANTS

##### DEVELOPMENT OF HIGHER LEVEL THINKING ABILITIES

- o Valuable for teachers of all levels. Program well organized. Good instructors. Valuable trying out workshop ideas in classroom situation.
- o I believe that these teaching strategies would be highly beneficial to our students here.
- o I rated all of them (5 items on evaluation sheet) very high because it was very useful to me. I only wish it were over a longer period of time so that we would have more time to think about what was taught and (I also) suggest that we have children whom we know to work with.
- o I suggest that registration slips be sent out early in the year so that more people take advantage of the programs being offered.
- o Successful! We need more of this kind (of workshops) in Guam.
- o I think the instructors did a very wonderful job! However, a workshop scheduled for summer must be scheduled before or after summer school. Many teachers signed up for summer school instead of (for) workshops.
- o This workshop was well organized, but it is rather short in length of time.
- o The workshop was very well presented; the leaders are to be commended for their organization and leadership. I thoroughly enjoyed the two weeks' activities.

##### SYSTEMATIC AND OBJECTIVE ANALYSIS OF INSTRUCTION

- o Would rate this workshop very high with adjustments for the situation here on Guam.
- o Would rate this workshop very high if more Guamanians would take part.
- o I feel that this laboratory program is an excellent one for Guam's educators. I just want to say that I believe it will be more effective if

the teachers to be observed are given at least two days to prepare and at the very end of the program, asked for their evaluations of the observers, trainer, etc. Perhaps then we can get more cooperation from them.

- o It's a wonderful program. Every classroom teacher should take advantage of it.
- o I considered this workshop more effective and applicable to my teaching profession than any other professional courses required at the University of Guam. I hope this workshop will be mandatory for all teachers and student teachers on the island.
- o This program was really very beneficial for the teachers because this will really help them understand their superiors, their pupils, and their coteachers.
- o I feel that this course should be required for all student teachers before they receive their degree. This is an excellent course for administrators, especially when they need to evaluate their teachers.
- o I have found this to be most enlightening. It has given me the background to work more effectively with others and to enable me to evaluate myself more effectively. In observing others, I have found many areas in which I can improve my own teaching. The classrooms we observed were very false situations--the planning was ineffective and we did not have enough time to work effectively with the lab teachers. I think student teachers from the University could work effectively in the lab classes. It would give them experience in an enrichment program, planning and executing independently. The analysis of the teaching would prepare them more thoroughly for classroom teaching.

#### INQUIRY DEVELOPMENT

- o This is one of the best workshops I've attended.
- o I think the workshop is needed to make teachers aware of other methods they can use to motivate students. Too often we become stuck in our ways.
- o I felt it was very helpful to really "work" in the workshop hours.
- o The potentiality might be there, but the way the course was taught was lamentable. There needs to be much critical analysis and evaluation by objective people, not by people who already favor the program. Before you do this, it is not right to try to make this a permanent inservice or preservice program.
- o Inquiry Development workshop didn't satisfy fully the classroom application of this technique in different areas such as reading, language, spelling. Is this applicable, effective and valid in different areas of studies?

- o I feel this is a good method but think not so applicable to the situation on Guam. I feel time and money could be spent in a better way to give these kids a better background. Then let them inquire. But the quality of elementary education is so poor here. I feel we should concentrate on improving it first. I feel (the technique) is good for high school.
- o I very much enjoyed this workshop, primarily because I feel it was worthwhile. The material and methods I learned here will be applied in my teaching. I feel that these past two weeks have been well spent.
- o I thought this was a very worthwhile, thought provoking class. I was particularly impressed with the efficiency of the instructors and time was never wasted.
- o It's great for what the kids need. The tapes used for examples in the workshop should be taped from a Guam class, not stateside.
- o This is a very essential course for educators in general. It allows a broad scope of thinking, but the time factor could present a problem because of the (amount of) material one wishes to learn.
- o I think this has more relevance to classroom teaching than any other education course I've had thus far.
- o Needs tightening up in problem focus and perceiving student attitude areas.
- o Very worthwhile, very useful. It will help us all be better teachers.
- o Under different conditions (states) this is a good workshop, but I question it in terms of relevance for Guam. This is going to be very useful for me in the states.

#### INTERACTION ANALYSIS

- o The workshop has negligible value if it is not followed up with a definite program of use in the school system.
- o This has given me an opportunity to see a new approach in instructional evaluation. Good Show.
- o This workshop could have been better if the instructors were more sure of what they were presenting.
- o With competent instructors the workshop would be improved greatly. The content seems useful.
- o The final test was extremely unfair!
- o I feel this workshop would be more worthwhile for administrators and supervisors. I feel the instructors were not particularly sure of themselves, although I understand they haven't had a lot of background experience. As a result, the class discussion got confused and caused a lot of false ideas which had to be corrected.

- o Workshop was successful and interesting. Good. Well done.
- o Much depends on the teacher and his method of teaching.
- o We could have made better progress had we fewer people in class and/or more meetings.
- o The trainers were not skilled enough.
- o Wonderful!
- o I feel it is limited in applications, but I will not hesitate using it when the occasion arises.
- o I feel that our instructors could have had a clearer knowledge of the material presented.
- o I think it would be of use for master teachers and student teachers.
- o For me, the value is that a teacher can check his own work and thus improve his or her method.
- o I need more training in accuracy and more practice but I feel that the idea is a good one.

#### RESEARCH UTILIZING PROBLEM SOLVING

- o This workshop is very short to accomplish a lot.
- o Program could have been covered in two or three days. Instructor's poor ability to communicate directions.

TABLE 1  
SUMMARY OF RATINGS BY WORKSHOP PARTICIPANTS

Questions	Mean	Workshop Ratings				SOAI	RUPS
		HLTA	IA	IP			
1. Overall value to participant	8.19	10.00	7.51	8.07		9.72	5.66
2. Rating compared with other educational courses	7.85	9.50	6.96	8.20		9.55	5.00
3. Rating compared with other inservice programs	7.75	8.93	6.68	8.66		9.46	5.00
4. Relevance for Guam educators	8.11	9.75	7.46	8.23		9.11	6.00
5. Rating as a permanent inservice or preservice program	8.27	9.62	7.94	8.10		9.38	6.33
	8.03	9.56	7.31	8.25		9.44	5.59

(HLTA) Development of Higher Level Thinking Abilities (N=8)  
 (IA) Analysis of Pupil-Teacher Interaction (N=29)  
 (ID) Inquiry Development (N=21)  
 (SOAI) Systematic and Objective Analysis of Instruction (N=18)  
 (RUPS) Research Utilizing Problem Solving Process (N=3)

APPENDIX E

University of Guam  
Department of Education  
Northwest Regional Educational Laboratory

GUAM EDUCATION PROJECT  
TEACHER EDUCATION PROGRAM

Comparative Analysis of the  
Effectiveness of NWREL Consultants  
and Guam Trainers in the  
Teacher Training Workshops  
Spring - Summer 1969

Dr. James R. Hale, Director  
Guam Education Project  
May 1, 1970

COMPARATIVE ANALYSIS OF THE EFFECTIVENESS OF NWREL CONSULTANTS  
AND GUAM TRAINERS IN THE TEACHER TRAINING WORKSHOPS: SPRING  
AND SUMMER, 1969

The following is a comparative analysis of the effectiveness of Laboratory consultants and Guam trainers in the teacher training workshops conducted on Guam by the Northwest Regional Educational Laboratory during the spring and summer of 1969. These workshops were titled Systematic and Objective Analysis of Instruction, (SOAI); Research Utilizing Problem Solving, (RUPS); Higher Level Thinking Abilities, (HLTA); Inquiry Development, (ID); and Analysis of Teacher - Pupil Interaction, (IA).

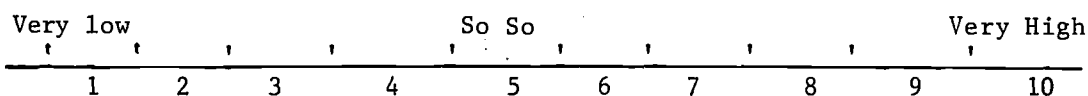
The five workshops were offered during the spring of 1969. A Laboratory consultant taught 12 potential trainers, selected from the University of Guam and the Department of Education, in each workshop. It was intended that some of the participants would serve as trainers in the workshops at a later date. During the summer of 1969, all five workshops were offered and open to participants from the University of Guam and the Department of Education. Fourteen participants were selected from the previous workshops to serve as trainers with direction and assistance provided by a Laboratory consultant.

It was assumed that selected participants from the spring workshop could serve as trainers in the summer workshops without significant loss of quality in the program.

In order to test this assumption, the participants in the spring workshops, taught by the Laboratory consultants, were asked to rate each workshop on the basis of five questions. The participants in the summer workshops, taught by the Guam trainers, were asked to rate each workshop on the same five questions. The five questions asked were

1. How would you rate this workshop in terms of the overall value to you?
2. How would you rate this workshop as compared to other courses in professional education which you have taken?
3. How would you rate this workshop as compared to other inservice programs you have attended?
4. How would you rate this workshop in terms of the relevance for Guam educators?
5. How would you rate this workshop as a permanent inservice or preservice program for Guam?

The participants were asked to rate each question using the following ten point scale.





The means of the participants' ratings on each question for both the spring and summer groups were calculated and compared employing the Median Test for Significant Differences. It was necessary to exclude the RUPS workshop ratings for both spring and summer because of the small number of respondents (three) in the summer workshop.

In order to be significant at the .05 level of confidence,  $\chi^2$  must be greater than 3.841. No significant differences in the ratings of the two groups were found. The hypothesis, calculations and conclusions are shown below.

#### Hypothesis 1:

The summer workshop participants, taught by Guam trainers, will rate each question for all four workshops the same as spring workshop participants taught by Laboratory consultants.

Table 1

Summary of Mean Ratings on Each Question by Spring and Summer Workshop Participants

Questions	Means	
	Spring	Summer
1. Overall value to participant	8.6	8.8
2. Rating compared with other professional sources	9.1	8.6
3. Rating compared with other inservice programs	9.0	8.5
4. Relevance for Guam educators	8.7	8.6
5. Rating as a permanent inservice program	8.6	8.8

N = 10

8.6 < Md < 8.7

Table 2

Number of Signs in a 2 x 2 Table for Mean Ratings on Each Question by Spring and Summer Workshop Participants

	Spring	Summer	Totals
Above Median	3	2	5
Not Above Median	2	3	5
Totals	5	5	10

$\chi^2 = 0$  with 1 df

n.s. @ .05

Conclusion: The hypothesis is accepted. The summer workshop participants, taught by Guam trainers, rated each question for all four workshops the same as spring workshop participants taught by Laboratory consultants.

A second test was made in order to determine how the participants rated each workshop on all five questions. The means of the participants' ratings for each workshop on all five questions for both the spring and summer groups were calculated and compared employing the Median Test for Significant Differences. It was again necessary to exclude the RUPS workshop ratings.

No significant difference in the ratings of the two groups was found. The hypothesis, calculations and conclusions are shown on the following pages.

Hypothesis II:

The summer workshop participants, taught by Guam trainers, will rate each workshop on all five questions the same as spring workshop participants taught by NWREL consultants.

Table 3

Summary of Mean Ratings of Each Workshop by Spring and Summer Workshop Participants

Workshop	Means	
	Spring	Summer
SOAI	8.4	9.4
HLTA	9.4	9.6
ID	8.5	8.3
IA	8.7	7.3

N = 8

8.5 < Md < 8.7

Table 4

Number of Signs in a 2 x 2 Table for Mean Ratings on Each Workshop by Spring and Summer Participants

	Spring	Summer	Totals
Above Median	2	2	4
Below Median	2	2	4
Totals	4	4	8

$\chi^2 = .50$  with 1 df

n.s. @ .05

Conclusion: The hypothesis is accepted. The summer workshop participants, taught by Guam Trainers, rated each workshop on all five questions the same as spring workshop participants taught by Laboratory consultants.

Table 5  
SUMMARY OF RATINGS BY WORKSHOP PARTICIPANTS

Questions	Spring and Summer		Workshop Ratings			
	Mean	HLTA	IA	ID	SOAI	
1. Overall value to participant	M <sub>1</sub> 8.6	9.6	8.1	8.1	8.5	
	M <sub>2</sub> 8.8	10.0	7.5	8.1	9.7	
2. Rating compared with other educational courses	M <sub>1</sub> 9.1	9.5	8.1	9.9	8.7	
	M <sub>2</sub> 8.6	9.5	7.0	8.2	9.6	
3. Rating compared with other inservice programs	M <sub>1</sub> 9.0	10.0	8.5	8.3	9.0	
	M <sub>2</sub> 8.5	8.9	6.7	8.7	9.5	
4. Relevance for Guam educators	M <sub>1</sub> 8.7	9.1	9.3	8.1	8.2	
	M <sub>2</sub> 8.7	9.8	7.5	8.2	9.1	
5. Rating as a permanent inservice or preservice program	M <sub>1</sub> 8.6	9.1	9.4	8.1	7.7	
	M <sub>2</sub> 8.8	9.6	7.9	8.1	9.4	
	M <sub>1</sub> 8.8	9.4	8.7	8.5	8.4	
	M <sub>2</sub> 8.6	9.6	7.3	8.3	9.4	

(HLTA) Development of Higher Level Thinking Abilities  
 (IA) Analysis of Pupil-Teacher Interaction  
 (ID) Inquiry Development  
 (SOAI) Systematic and Objective Analysis of Instruction

(N<sub>1</sub> = 7; N<sub>2</sub> = 8)  
 (N<sub>1</sub> = 12; N<sub>2</sub> = 29)  
 (N<sub>1</sub> = 12; N<sub>2</sub> = 21)  
 (N<sub>1</sub> = 11; N<sub>2</sub> = 18)

M<sub>1</sub> = Spring      M<sub>2</sub> = Summer

## APPENDIX F

### EVALUATION REPORT

#### Questioning Strategies Workshop

In April 1970, the final workshop, Questioning Strategies was held in the series of workshops under the Guam Education Project Teacher Education Program. The venture was cosponsored by the Guam Department of Education and the University of Guam and the participants in the workshop included representatives from both organizations. A consultant from the Northwest Regional Educational Laboratory (NWREL) of Portland, Oregon conducted the workshop. Eleven of the participants were from the University of Guam and nine represented the Department of Education.

An evaluation form was distributed to all of the workshop participants at the conclusion of the workshop and each person was asked to complete the form immediately. Twenty forms were completed.

The form consisted of five questions (see attachment) and a rating scale of 1 to 10. Means were calculated for the participants' ratings on each question.

The means are all well up on the high end of the scale which compares favorably with other workshops in the series. The lowest rating of 7.8 was for the workshop as a permanent inservice or preservice program and the high of 8.9 was for a comparison with other educational courses.

Table 1

QUESTIONS	WORKSHOP RATINGS
1. Overall value to participant	8.5
2. Rating compared with other educational courses	8.9
3. Rating compared with other inservice programs	8.0
4. Relevance for Guam educators	8.1
5. Rating as a permanent inservice or preservice program	7.8
N = 20	Mean Score 8.3

An examination of the data of the lowest rating of 7.8 for question five reveals an extreme range of 9.

<u>x</u>	<u>f</u>
10	9
0	3
8	1
7	2
6	1
5	1
4	1
1	<u>2</u>
	20

The median of the ratings for this question would be nine. The comments show that only one person questioned the quality of the content of the workshop. Four other low ratings reflected a concern over the ability of Guam educators to assimilate the ideas. Fifteen participants apparently didn't see any problem at all.

## COMMENTS FROM PARTICIPANTS

### QUESTIONING STRATEGIES

- o This ought to be added to the semester workshop, Developing Cognitive Abilities. Some changes in definition would be required.
- o The workshop has been very educational on my part. An awareness was developed on my part on Question Strategy.
- o Question number 4 and 5 leave me a bit in doubt, for local Guam educators, I'm not sure they have the background. On the other hand, presenting it as a skill (period) perhaps would be valuable.
- o Excellent. This fills the need for good sensible, logical questioning strategies. We can be more effective teachers if we can establish our goals and objectives and then be able to use effective questioning strategies to reach our goals.
- o Because of the bilingual situation, complex questioning procedures may frustrate elementary teachers if they try to apply them in the classroom.
- o This workshop will go great as an introduction to Higher Level Thinking then end with Inquiry. In all I enjoyed the workshop and learned a lot.
- o I think the main idea, plus sample implementation, could have been done in two 3-hour sessions. The thought of its being a three credit course horrifies me. The idea that "process is content," if I believe it, would destroy my whole professional life.
- o I have only participated in a couple of these workshops. I have found them extremely valuable. Only real concern I have is that I think the whole group of courses should be preceded by some kind of training course to help teachers become humanized so they can use the course effectively. Thanks for everything. Must say this was the worst social and "fun" group I've been in.
- o As regards number three, this is the first workshop I have attended.
- o This has been an excellent workshop. I especially appreciated the experience of two approaches. Since I have experienced all of the other models brought by the Lab to Guam, I must make note of regret. This model should have preceded Inquiry and HLTA. At least it would have helped me.
- o I felt that I have learned much during this workshop, in terms of developing a skill with this "tool" for making education more effective.
- o A week very well spent.

- o It is the most valuable workshop for the following reasons:
  - 1. Practical, hitting the heart of teaching/learning process
  - 2. Necessary skills in teachers
  - 3. Students are the main concern in the system.
  - 4. It's great, the instructor's style is absolutely great. Enjoyed it tremendously.
- o Slack time should (or could) be taken up by practicum sessions or readings on the subject of questioning.
- o If only I could attend another related workshop, if any, in the near future.
- o Good if we could get teachers on Guam to change or take on new ideas.
- o The methodology in teaching the course was very good. It allowed for individual differences and growth. I think the types of questions teachers use could be improved, but I think this system is still too cumbersome for the average person to apply
- o This is my most rewarding experience in regards to workshops that I have attended.
- o I enjoyed every bit of it. I learned so much in five days.
- o Thanks.



Participant Evaluation  
NWREL/Guam Education Project

1. How would you rate this workshop in terms of the overall value to you?

Very Low					So So					Very High
1	2	3	4	5	6	7	8	9	10	

2. How would you rate this workshop as compared to other courses in professional education which you have taken?

Very Low					So So					Very High
1	2	3	4	5	6	7	8	9	10	

3. How would you rate this workshop as compared to other inservice programs you have attended?

Very Low					So So					Very High
1	2	3	4	5	6	7	8	9	10	

4. How would you rate this workshop in terms of the relevance for Guam educators?

Very Low					So So					Very High
1	2	3	4	5	6	7	8	9	10	

5. How would you rate this workshop as a permanent inservice or preservice program for Guam?

Very Low					So So					Very High
1	2	3	4	5	6	7	8	9	10	

Comments: